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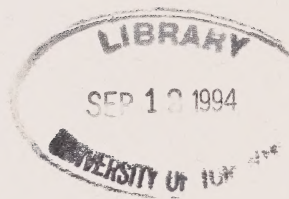
Canada's International Trade Business Plan

1994-1995

***An Integrated Plan for Trade, Investment
and Technology Development***



Doing Business Abroad



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Strategic Overview

Canada's International Trade Business Plan (ITBP) identifies key international business opportunities and challenges and provides a tangible action plan for Canadians to increase their success in the global marketplace.

Introduction

The ITBP is the result of extensive consultations involving the federal government, the provinces and the private sector, aimed at achieving the following:

- strengthening the link between global opportunities and Canadian industry's supply capabilities
- better coordinating of federal (and increasingly provincial) international business development strategies, priorities and activities to ensure the most efficient possible use of public resources
- ensuring that federal international business development strategies and activities reflect Canadian industry's real needs.

Format

The plan has three components:

- **Strategic Overview** — A consolidated statement of international business development policies and directions which the Government of Canada will pursue in close partnership with the Canadian business community.
- **Industry Sector Strategies** — A series of individual sector profiles summarizing the specific strategies to be undertaken by the federal government and industry to take advantage of emerging global trade, technology and investment opportunities.

- **International Activities** — A list of international activities to be undertaken in support of each sector strategy. Canadian companies are invited to participate in these events and are encouraged to contact the leading department or agency for details.

Available sector strategies and their accompanying international activities are listed on the back cover of this document.

Future Directions: Your Views Are Important

The ITBP's format and orientation is continually changing in response to the Canadian business community's evolving needs. Past users of the ITBP will notice major changes in the 1994-95 Plan. This year, each of the 21 sector strategies (and the Strategic Overview) has been packaged individually so that recipients get only the information they require.

Your views are vital to helping us make the ITBP effectively support your international business development goals. Please complete and return the one-page questionnaire provided. We need your feedback.

A New Approach to International Business Development

The federal government is committed to an active, independent international business development strategy that strengthens and expands Canada's global trade, technology and investment links. A fresh approach to Canada's international business relations is critical to our economic future and to attaining many of our social goals, particularly the creation of quality, high-skill jobs.

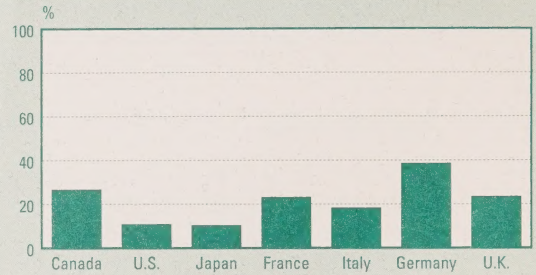
Sound domestic economic policies are essential. But it is increasingly clear that Canada's future economic well-being lies in the global marketplace. Canadian exports already account for about 40 percent of total private sector output and more than 2 million jobs are directly or indirectly dependent on exports of goods and services. Each \$1 billion in new exports translates into an estimated 9 000 jobs. Canada, after Germany, is the most trade-dependent G-7 country (see Figure 1).

Fortunately, the export and investment opportunities open to Canadian businesses are unprecedented. In certain regions of the world — particularly the Pacific Rim, and much of Latin America — economic activity is expected to thrive throughout the 1990s (see Figure 2 for Canada's major export destinations in 1992). The completion of the Uruguay Round of the GATT negotiations and the implementation of NAFTA on January 1, 1994, will also help open up markets.

Exploiting these opportunities, however, will not be easy. Globalization and technological change mean that companies face growing uncertainty in foreign markets, intensified competition, higher market and product development costs, and shorter product life cycles.

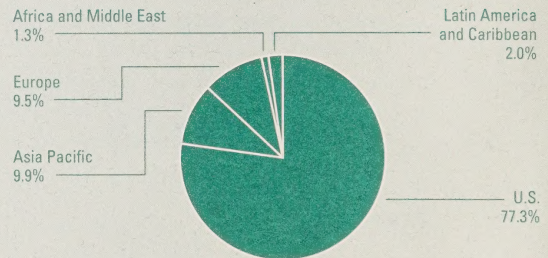
The high costs of doing business in today's global economy call for clear priorities, sound and

Figure 1 — Exports of Goods and Services as % of GDP, 1992



Source: International Monetary Fund.

Figure 2 — Canada's Merchandise Exports by Regional Destination, 1992



Source: Statistics Canada.

well-executed business development strategies, flexibility to meet changing circumstances and better management of financial and human resources by both the private and public sectors.

The government's approach to international business development will build on three broad objectives: greater **partnership** between the public and private sectors; expanded trade **participation** of those Canadian companies with international potential, especially small and medium-sized firms; and increased **diversification** of Canada's trade relations.

Canada's International Trade Business Plan

In order to improve future editions of the International Trade Business Plan (ITBP), we would like your feedback. On a scale of **1** (Excellent) to **5** (Poor) please evaluate the plan on the basis of the following:

	Excellent				Poor
Overall Usefulness	1	2	3	4	5
Usefulness of Strategic Overview	1	2	3	4	5
Usefulness of Industry Sector Strategies	1	2	3	4	5
Usefulness of Activity/Event Lists	1	2	3	4	5
Timeliness	1	2	3	4	5
Overall Presentation/Format	1	2	3	4	5

Comments:

What sector(s) is (are) of most interest to you?

Does your company currently export? Yes ☐ No ☐

If **yes**, to which markets?

U.S.	<input type="checkbox"/>	Europe	<input type="checkbox"/>
Asia-Pacific	<input type="checkbox"/>	Latin America/Caribbean	<input type="checkbox"/>
Africa/Middle East	<input type="checkbox"/>	Other (please specify)	

What is the size of your company (annual sales)?

Under \$1 million	<input type="checkbox"/>	\$1 million – \$5 million	<input type="checkbox"/>
\$5 million – \$10 million	<input type="checkbox"/>	Over \$10 million	<input type="checkbox"/>

How many full-time employees do you have?

How would you like to have this document made available to you in the future?

Hard copy	<input type="checkbox"/>	Electronic Bulletin Board (BBS)	<input type="checkbox"/>
Fax-back system	<input type="checkbox"/>	CD ROM	<input type="checkbox"/>
Floppy Disk: DOS File	<input type="checkbox"/>	Floppy Disk: Macintosh File	<input type="checkbox"/>

Optional

Name of your company _____
 Your name and phone number _____
 Would you like to be contacted? Yes ☐ No ☐

Please fax this completed questionnaire to: (613) 996-9265

Or mail to: Trade Planning and Coordination Division
 Department of Foreign Affairs and International Trade
 Tower C, 5th Floor, 125 Sussex Drive
 OTTAWA, Ont.
 Canada K1A 0G2



Plan de promotion du commerce extérieur du Canada

QUESTIONNAIRE

Afin d'améliorer les prochaines éditions du Plan de promotion du commerce extérieur du Canada, nous aimerions connaître votre point de vue. Selon une échelle de 1 (excellent) à 5 (médiocre), veuillez évaluer le Plan selon les points suivants :

	Excellent				Médiocre
Utilité de l'ensemble	1	2	3	4	5
Utilité de l'Aperçu stratégique	1	2	3	4	5
Utilité des stratégies sectorielles	1	2	3	4	5
Utilité des listes d'activités	1	2	3	4	5
A propos	1	2	3	4	5
Présentation générale	1	2	3	4	5

Commentaires :

Quels secteurs présentent le plus d'intérêt pour vous ?

Votre entreprise exporte-t-elle présentement ?

Oui [] Non []

Si oui, vers quels marchés ?

Eats-Unis	[]	Europe	[]
Asie-Pacifique	[]	Amérique latine ou Antilles	[]
Afrique ou Moyen-Orient	[]	Autre marché	[]

Quel est le chiffre d'affaires annuel de votre entreprise ?

Moins de 1 million \$	[]	1 - 5 millions \$	[]
5 - 10 millions \$	[]	Plus de 10 millions \$	[]

Combien d'employés à plein temps travaillent pour vous ?

Comment aimeriez-vous obtenir ce document à l'avenir ?

Copie papier	[]	Système d'envoi automatisé par télécopie	[]
Babillard électronique	[]	CD ROM	[]
Disque souple : fichier DOS	[]	Disque souple : fichier Macintosh	[]

Facultatif

Raison sociale de l'entreprise	
Nom et numéro de téléphone	
Aimeriez-vous que quelqu'un communique avec vous ?	Oui [] Non []

Une fois rempli, veuillez renvoyer ce questionnaire par télécopieur au : (613) 996-9265

ou le poster à l'adresse suivante : Direction de la planification et de la coordination du commerce

Ministère des Affaires étrangères et du Commerce international
Tour C, 5^e étage, 125, promenade Sussex

OTTAWA (Ont.)

CANADA K1A 0G2



Canada's International Trade Business Plan

ACOA	Atlantic Canada Opportunities Agency
AG CAN	Agriculture and Agri-Food Canada
AMPAQ	Quebec Food Processors Association
CCC	Canadian Commercial Corporation
CIDA	Canadian International Development Agency
CIS	Commonwealth of Independent States
CRTC	Canadian Radio-television and Telecommunications Commission
CSA	Canadian Standards Association
CSGA	Canadian Sporting Goods Association
DFAIT	Department of Foreign Affairs and International Trade
DFO	Department of Fisheries and Oceans
DND	Department of National Defence
EC	European Community
EDC	Export Development Corporation
ENVCAN	Environment Canada
FORD Q	Federal Office of Regional Development — Quebec
FTA	Canada-U.S. Free Trade Agreement
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GNP	Gross National Product
HRDC	Human Resources Development Canada
IDRC	International Development Research Council
ISO	International Organization for Standardization
ITC	International Trade Centre
MAPAQ	Ministry of Agriculture, Fisheries and Food of Quebec
NAFTA	North American Free Trade Agreement
NATO	North Atlantic Treaty Organization
NRC	National Research Council Canada
NRCan	Natural Resources Canada
NR-CFS	Natural Resources — Canadian Forest Service
NSAM	Nova Scotia Agriculture and Marketing
OECD	Organisation for Economic Co-operation and Development
OMAF	Ontario Ministry of Agriculture and Food
SAF	Saskatchewan Agriculture and Food
WED	Western Economic Diversification



Plan de promotion du commerce extérieur du Canada

ACAS	Association canadienne d'articles de sport
ACDI	Agence canadienne de développement international
AFPA	Association des fabricants de pièces d'automobile du Canada
AG CAN	Agriculture et Agro-alimentaire Canada
ALE	Accord de libre-échange entre le Canada et les États-Unis
ALENA	Accord de libre-échange nord-américain
AMPAG	Association des manufacturiers de produits alimentaires du Québec
ANASE	Association des nations de l'Asie du Sud-Est
ANSI	American National Standards Institute
APECA	Agence de promotion économique du Canada Atlantique
BFDRO	Bureau fédéral de développement régional, Québec
CAO	Conception assistée par ordinateur
CANMET	Centre canadien de la technologie des minéraux et de l'énergie
CCC	Corporation commerciale canadienne
CE	Communauté européenne
CEI	Communauté des États indépendants
CIC	Centres de commerce international
CMCI	Comité des ministères sur le commerce intérieur
CNRC	Conseil national de recherches Canada
DEO	Diversification de l'économie de l'Ouest Canada
DRHC	Développement des ressources humaines Canada
EC	Environnement Canada
FAO	Fabrication assistée par ordinateur
FCV	Fédération canadienne du vêtement
FDA	Food and Drug Administration
G-7	Groupe des Sept
GATT	Accord général sur les tarifs douaniers et le commerce
ISO	Organisation internationale de normalisation
MAAO	ministère de l'Agriculture et de l'Alimentation de l'Ontario
MAAS	ministère de l'Agriculture et de l'Alimentation de la Saskatchewan
MACNE	ministère de l'Agriculture et de la Commercialisation de la Nouvelle-Écosse
MAECI	ministère des Affaires étrangères et du Commerce international
MAPAG	ministère de l'Agriculture, des Pêcheries et de l'Alimentation du Québec
MDN	ministère de la Défense nationale
MPO	ministère des Pêches et des Océans
NMFS	National Marine Fisheries Service
OCDE	Organisation de coopération et de développement économiques
OTAN	Organisation du Traité de l'Atlantique Nord
PARI	Programme d'aide à la recherche industrielle
PIB	produit intérieur brut
PME	petite et moyenne entreprise
PNB	produit national brut
PRDEI	Programme de recherche et de développement énergétiques dans l'industrie
RADAR	Réseau d'approvisionnement et de débouchés d'affaires
R-D	recherche-développement
RNCAN	Ressources naturelles Canada
SCF-RNCAN	Service canadien des forêts, Ressources naturelles Canada
SEE	Société pour l'expansion des exportations



Building Partnerships

Strengthening Consultations with Industry

Consultations with a wide variety of industry groups are an integral part of the government's approach to international business development. Canada's ITBP consultations will therefore be intensified to ensure that ITBP sector strategies reflect the private sector's interests as effectively as possible.

The International Trade Advisory Committee (ITAC) and the Sectoral Advisory Groups on International Trade (SAGITs) also provide an ongoing two-way flow of information and advice between the government, business and labour on international business matters. The government is committed to strengthening this consultative mechanism by structuring the committees to focus on a broader range of trade policy and trade development programs and issues. To this end, three task forces are being established under the ITAC to focus more specifically on trade policy, trade development and environmental issues affecting various industry sectors. Individual SAGITs will set up other task forces or sub-committees to carry out in-depth analysis on particular issues.

Improving Federal-Provincial Cooperation

In view of the closure or restructuring of provincial foreign office operations, and the growing fiscal pressures all governments face, the federal government will work closely with provinces individually, or on a regional basis, to promote better coordination of international business planning and activities, and reduce areas of potential overlap or duplication.

Likely issues to be addressed in the coming year include database sharing, electronic communication linkages, integrating and streamlining the delivery of funded assistance programs and services, exporter education and preparation, and investment promotion and leveraging.

Greater Government Cohesion and Service

The government is committed to establishing clear government-wide objectives to guide resource allocation decisions for international business development. This means eliminating overlap and duplication between departments and setting clear priorities. Canada's ITBP, an important part of this process, will therefore be strengthened and broadened in the coming year.

The government will also improve business community access to government information services, such as those provided by the Canada Business Service Centres, which serve as one-stop information "windows."

Increasing Trade Participation

Becoming a Nation of Traders

Canadian companies are not taking full advantage of global market opportunities. The result is fewer jobs and slower domestic economic growth. Less than 8 percent of Canadian businesses are directly involved in exporting, while more than 60 percent of all exports are made by just 100 companies. Many Canadian companies not currently exporting have the potential to increase sales and production by pursuing opportunities in foreign markets.

Recognizing these opportunities and acting to take advantage of them are the first steps toward developing a successful international orientation. The Canadian government is committed to working closely with its partners to promote greater awareness of global market opportunities and to encourage Canadian companies to develop the skills to act on them.

A recent example of success is the Forum for International Trade Training (FITT), which combines the resources and leadership of the federal government, the Canadian Chamber of Commerce, the Canadian Federation of Labour, the Canadian Manufacturers' Association and other

private sector organizations, to provide much needed formal international business training.

Fostering SMEs

Such support and assistance are most critical for Canada's thriving small and medium-sized enterprises (SMEs). For well over a decade, SMEs have been the engine of the Canadian economy, creating jobs, while other sectors of the economy were stagnant.

During the 1980s, firms with fewer than 100 employees created over 2.3 million net new jobs, or 87 percent of the total growth in employment in this period.

In the coming months, the government will conduct a comprehensive review of programs aimed at small businesses with a view to encouraging many more SMEs to export. Export promotion services and programs will be reviewed to ensure they are effective and provide "seamless" delivery. Where warranted, the range of services provided will also be broadened.

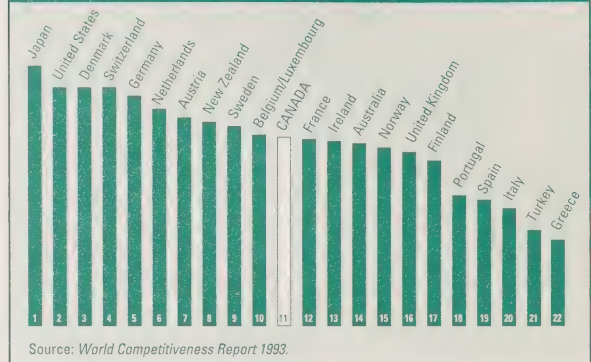
Services firms, which comprise a significant proportion of dynamic SMEs, will also be encouraged to take advantage of new market opportunities. Greater awareness of growing export opportunities, enhanced marketing skills, an expanded ability to finance services receivables and strengthened service sector organizations, should all lead to increased service exports and job growth.

The Domestic Foundation of Competitiveness

The Globalization of Business

The foundations of competitiveness abroad are rooted in the domestic business environment. To compete globally and win, Canadian-made products must combine innovation, quality and competitive prices (Canada's relative ranking in international competitiveness is shown in Figure 3). Sustaining success implies continuous improvements in productivity and technological

Figure 3 — World Economic Forum: An International Competitiveness Report Card



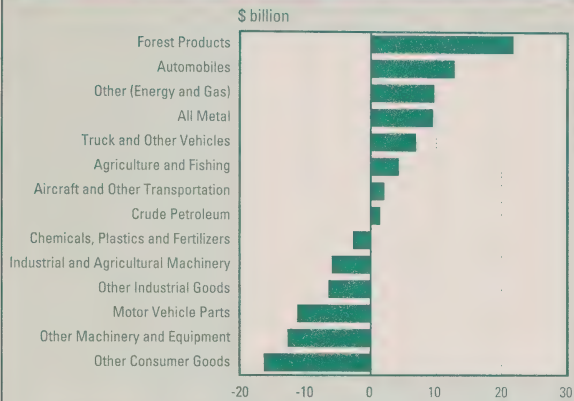
mastery. Canadian companies require a business environment that fosters expanding investment in equipment, people and knowledge.

As the world economy becomes more open and competitive, the distinctions between international and domestic markets become blurred. As barriers to trade are dismantled, to sell domestically means to compete successfully against foreign products, services and ideas.

In the coming months, the government will examine several issues crucial to the competitiveness of all sectors of Canada's economy. We must examine ways to modernize our business framework policies, reform the way we regulate, and adjust our corporate tax regime. Policies relating to corporations, intellectual property, competition law and enforcement practices, bankruptcy laws, consumer policy and issues affecting SMEs will all receive special attention.

The Human Dimension

The human dimension is crucial for sustainable competitive success. In addressing such vital areas as income security, education, skills development and retraining, the government will aim to remove rigidities and disincentives in the labour market and our income support programs.

Figure 4 — Canada's Merchandise Trade Balance by Sector, 1993

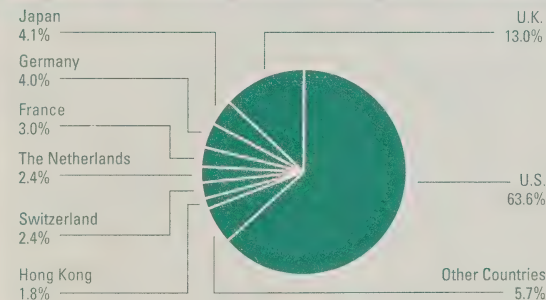
Source: Statistics Canada (January to November 1993, Annualized).

estimates, existing barriers impose a crippling burden on Canadian enterprises amounting to billions of dollars annually. The focus will be on barriers dealing with investment, procurement, labour mobility, business subsidies and standards.

Sector Competitiveness Frameworks

For Canada to prosper in the new world economy, we must identify and understand our competitive advantages. In the coming months, the federal government will work closely with sector stakeholders to establish a series of competitiveness frameworks for key Canadian industrial sectors (the trade balance of some of Canada's major industrial sectors is set out in Figure 4). In a world of limited public resources, the federal government must set clear sectoral priorities if its industrial development efforts are to succeed.

These new frameworks will emphasize partnerships at the sectoral level and will focus on identifying key challenges and growth prospects. One main objective will be to explore policies that have, or could have, an impact on sector performance. They will also aim to identify opportunities for more concerted action by government and industry to build the necessary infrastructure to help businesses compete successfully.

Figure 5 — Foreign Direct Investment in Canada (distribution by major source countries), 1991

Total = \$131.6 billion.
Source: Statistics Canada.

Efforts will focus on the need to direct more federal funding to arrangements such as on-the-job training. Ways of expanding private sector training will also be explored.

Internal Barriers to Trade

The federal government will encourage the provinces to dismantle over 900 internal trade barriers that persist in Canada. By conservative

Attracting International Business Investment

Attracting international firms and capital to Canada will also play an important part in meeting the government's commitment to job creation and the growth and internationalization of Canadian SMEs. International investment can provide the capital for new plants and equipment. Investment partnerships such as joint ventures and strategic alliances can provide Canadian participants not only with capital, but also with technology, management skills, training, market access and new relations with buyers and sellers (see Figure 5 for major source countries of foreign direct investment in Canada in 1991).

Between 1985 and 1990, global direct investment flows grew by 34 percent, compared to 13 percent for exports and 12 percent for GDP. Clearly, international investment is becoming a dominant vehicle for international commerce. Many jurisdictions, from Eastern Europe to Southeast Asia, are competing for job-creating investments. In seeking to attract investment destined to North America, Canada competes directly with the U.S. and Mexico.

Given the competition for international investment, Canada must offer an attractive, competitive business environment, and business and government must work actively to promote the benefits of investing in Canada to potential foreign investors. International investors must also be informed about specific investment opportunities. Our competitors are doing nothing less.

Trade Diversification

The federal government is committed to an integrated, innovative trade policy that maintains and improves access to global markets. The GATT and its eventual successor, the World Trade Organization (WTO), will remain the cornerstones of Canada's trade policy.

The aggressive pursuit of strategic regional and bilateral opportunities will complement this multilateral approach. In addition, the government will apply all the tools of Canadian foreign policy to buttress and defend the market access gains Canada has made through the international rule-making process.

The GATT and the Multilateral Trading System

The conclusion of the Uruguay Round of GATT negotiations in late 1993 was a crucial step in securing and diversifying Canadian access to global markets. World governments, faced with the challenges of rapidly shifting trade and investment patterns, changing technology, domestic pressures

from less competitive industries, and growing interdependence, have effectively responded by agreeing to a more open, comprehensively reformed rules-based system for conducting international trade into the next century.

This provides a sound economic platform for domestic economic growth and jobs creation, with components of particular importance from Canada's perspective.

- **Market Access** — While some details are still to be clarified, Canada's trade liberalizing package compares very favourably with that of other countries. Tariff cuts will average well over 50 percent with our European, Japanese, Korean and several other trading partners. Liberalized sectors of importance to Canada include pulp and paper, chemicals and petrochemicals, non-ferrous metals and minerals, computer equipment, office furniture, pharmaceutical, farm equipment, financial services and telecommunications.
- **Trade Rules** — Fundamental reform of GATT rules will help ensure that the new multilateral trading system has the effectiveness and credibility to remain the cornerstone of Canada's trade policy. Most noteworthy is our achievement of a strong subsidy/countervail agreement with a much clearer definition of subsidies and criteria exempting major regional programs and many R&D incentives from countervailing duties. These achievements will considerably limit the scope for other countries' harassment of Canadian exports.
- **Services and Intellectual Property** — The Uruguay Round outcome brings strong new rules to our economy's rapidly growing knowledge-based sectors. Canada was also able to exempt cultural industries from unacceptable services disciplines and intellectual property rules.

- **Agriculture** — Negotiations resulted in a substantial, fair and equitable outcome, with the rules of international agricultural trade applicable to all countries. Agriculture around the world will gradually move towards more market-based price disciplines, and will eventually be brought fully into the GATT. The level of tariff protection applicable to Canada will allow effective maintenance of marketing boards. Nevertheless, new Canadian export opportunities have been created in several agricultural sectors.
- **World Trade Organization** — Canada played a leading role in GATT reform through promoting the establishment of a new WTO. The WTO will be central to the effective implementation of the Uruguay Round package, and will emerge as the common institutional framework for conducting international trade relations. The WTO will provide a critical forum for further multilateral trade negotiations and will administer the Settlement of Disputes, with its more automatic, speedier and binding Rules and Procedures.

NAFTA: The Unfinished Agenda

Although the governments of Canada, the U.S. and Mexico have approved NAFTA, the NAFTA agenda is incomplete. Work is still required to ensure the maximum benefit from our participation in the agreement. In particular, Canada will press its NAFTA partners to address outstanding concerns with regard to antidumping and subsidy/countervail matters through the two working groups established as a prerequisite for Canadian proclamation of the agreement. Canada will also work closely with our trading partners to oversee the implementation of the side agreements on the environment and labour cooperation.

The federal government will work immediately with the provinces and the Canadian business community to take full advantage of the increased market access opportunities provided by the liberalization of the U.S. and Mexican markets. Privileged access to these important regional markets is extremely valuable in its own right.

Canadian companies can, moreover, deploy their experience and success in the U.S. and Mexican markets to prepare themselves to diversify business linkages beyond North America. The improved economies of scale, product specialization and marketing experience they gain through increased exports to neighbouring markets can further their global competitiveness.

Finally, the Canadian government will actively explore the possibilities for further trade diversification generated through its successful introduction of an accession clause into NAFTA, potentially opening the agreement to other growing market economies. NAFTA expansion to other medium-sized regional trading partners would have the advantage of further balancing a trading arrangement where the U.S. remains the largest producer, trader and investor.

Targeting Bilateral and Regional Opportunities

Canada will also explore the possibilities for trade expansion and diversification through strategic bilateral linkages with individual national partners. Such relations can vary widely, from comprehensive trade liberalizing agreements to less ambitious pacts designed to share technology and know-how. Canada will maintain an open attitude to such options and will work closely with Canadian industry to explore potential opportunities.

While multilateral, regional and bilateral trade agreements serve as the basic framework for Canada's overall trade relations, the critical task remains of identifying priority opportunities corresponding to Canadian strengths. International opportunities and the means to take advantage of them will vary among Canadian industry sectors, requiring the establishment of sector priorities as an integral component of coherent geographic strategies.

An effective international business development strategy must continually respond to a changing global environment to capitalize fully on emerging opportunities and to secure the greatest continuing return from existing trade development resources.

A successful long-term international trade strategy involves difficult choices. The federal government is committed to making the tough decisions needed to guide the development of an effective and responsive national trade strategy for Canada. The following regional situation reports will help form the basis of resource allocations and program priorities in the months and years ahead.

- **Pacific Rim** — This region's markets, which will have a projected 60 percent of the world's population, 50 percent of global production, and 40 percent of total consumption by the year 2000, are of vital interest to Canada. It is projected that this region's countries will be responsible for half of all global trade before the turn of the century — equivalent to at least five new Canadian economies. Asia, which has quickly become Canada's second most important trading partner after the U.S., offers the potential for significantly greater commercial success for the foreseeable future. Canada will focus increasing attention on these markets in its international business development and trade policy initiatives in the short term.

- **Latin America** — Latin America and the Caribbean offer a market of close to half a billion consumers in countries that constitute an increasingly modern, stable and democratic region. Longstanding Canadian trade links are rapidly expanding, and there is considerable potential in several markets for increased export and investment opportunities. By 1995, the economic growth rate of several Latin American markets should equal that of Pacific Rim countries. Canadian commercial success in Mexico has already expanded dramatically under the NAFTA framework.
- **U.S.** — The U.S. will remain Canada's principal trading partner, accounting for over three quarters of Canadian exports. NAFTA's implementation and further refinement will play an important role in consolidating and securing this crucial economic relationship.

Commercial prospects for enhanced Canadian exports and investment are brightening with continued border and market liberalization under the dual auspices of NAFTA and the GATT, and as the U.S. economy emerges from the recession. In addition, changes to U.S. technology policies and programs are under way which may offer further opportunities to Canadian firms. These developments should help smaller Canadian companies use the U.S. market as a proving ground before expanding their business activities overseas.

Record-setting monthly levels of exports to the U.S. in 1993 are expected to result in a 15-percent increase in exports over 1992. Based on U.S. economic trends, the Canadian government has identified six sectors as priorities for trade development support in the year ahead: computers and semiconductors; instrumentation; health

and medical products; communications and telecommunications; services; and environmental industries.

- **Europe** — A traditional market for Canadian exports and a source of inward investment and technologies, Europe continues to hold significant new opportunities for Canadian companies in the short and long term. The economic and political integration of western Europe, the establishment of democracies and market economies in eastern Europe and the growing economic interdependence of east and west, should guarantee Europe's vital role in Canada's trade profile for the foreseeable future. Maintaining and improving our access to existing and potential European goods, services, technologies and capital markets will remain important. While central and eastern European countries, including those of the former U.S.S.R., are still absorbing the costs of transition to market economies, real long-term growth prospects exist in several sectors of interest to Canada.
- **Africa and the Middle East** — On a selected basis, these diverse markets offer real, attractive opportunities for Canadian companies. The dramatic developments in the Middle East peace process and the market realignments resulting from the Gulf war have created significant trade opportunities, many over the short term. North Africa is our most important regional market on the African continent and pressing economic reforms are fuelling new business opportunities. The recent lifting of sanctions towards South Africa and the opening of a trade office in Johannesburg will help rejuvenate bilateral trade relations.

The Tools to Succeed

The federal government is actively reviewing its principal international business development programs and related sectoral competitiveness policies to establish a blueprint for action. Several priorities are outlined below.

The Trade Commissioner Service

The network of Trade Commissioners in Canada and some 100 offices around the world is the most effective tool available for helping Canadian firms penetrate foreign markets. The Trade Commissioner Service (TCS) represents the human face of the government's trade development support, working closely with companies to address their individual needs at home and abroad.

Trade Commissioners provide export counselling to prepare companies for their first forays internationally or to expand their international business horizons. They identify specific trade opportunities, provide advice to exploit them and open doors to make Canadian international business success a reality. Their daily networking enables Canada to reach influential decision makers around the world and identify valuable local partners for Canadian firms. Trade Commissioners play a vital monitoring and advocacy role abroad, regularly intervening with foreign governments to maintain and improve market access.

On the occasion of the 1994 Centenary of the TCS, the review will examine ways of strengthening the capability of trade officers to support companies' priority needs. A more strategic placement of TCS resources will be a related objective.

Access to Financing

Ready access to adequate financing is essential to foster business growth and to export successfully. A thorough review will identify shortcomings in existing financing mechanisms facing Canadian companies seeking to expand internationally. The federal government will work closely with financial institutions and business leaders to tackle outstanding financing needs quickly. Issues addressed will include better coordination of existing services, simplifying application procedures, improving access to information on financing possibilities, and the possible creation of new mechanisms to fill gaps in existing services.

Business Networks

Becoming active participants in emerging business networks enables SMEs to be more competitive; they gain the resource advantages of larger firms, without the burden of excessive overhead. The federal government is committed to providing matching grants to encourage greater business network development.

Technology Development and Acquisition

A **Canadian Technology Network** will be established to build upon NRC's Industrial Research Assistance Program (IRAP). The network will ensure that SMEs have access to the latest information on new technology and an expanded range of advice and services so they can fully exploit new market opportunities.

An **Engineers and Scientists Program** will provide funds for SMEs to hire engineers, technologists, scientists and industrial designers. It will help SMEs fully benefit from technology transfer opportunities and be partners in commercializing new products.

A **Canada Investment Fund** will be created to help ensure an adequate supply of capital for the financing of innovation by leading-edge technology firms. The government is also committed to greater strategic management of its approximately \$6 billion investment in support of domestic science and technology (S&T).

The federal government will support the development of Canada's **"Information Highway"** to connect our major communications and computer networks into a single "network of networks," with the prospect of eventually linking every Canadian home, business, government office, university, library, school, hospital and public institution coast to coast.

Environmental technologies and related services will be a major component of the federal government's strategy for economic growth. A comprehensive strategy is under development, with the international market for products and services an important element. This sector's priority is borne out by the government's commitment to direct 25 percent of all new government funding for R&D to environmental technologies.

The government will also give renewed emphasis to the **Technology Inflow Program (TIP)**, technology export opportunities and the associated activities of Canadian Science Counsellors and Technology Development Officers in our overseas posts to encourage the active adoption of internationally available best practice or leading-edge technologies. It will foster greater teamwork between Canadian offices abroad and the domestic network of technology experts associated with IRAP and the evolving Canadian Technology Network. Canada's international investment strategy should place greater priority on promoting strategic partnering between emerging Canadian technology companies and complementary leading-edge technology enterprises abroad.

To ensure Canadian access to international R&D, **world-class science and research institutions**, in collaboration with knowledge-intensive SMEs, will be encouraged to develop alliances with global research and technology centres abroad, particularly in Europe and Japan. Canada will also monitor the evolving technology policies and practices of other countries, to ensure that Canadian interests are not at a disadvantage, and promote the adoption of leading-edge practices.

Market Intelligence

Access to timely, accurate foreign market information and, more importantly, “market intelligence,” is a prerequisite to Canadian companies’ sustained international commercial success. Market intelligence is that hard-to-come-by knowledge or insight, often resulting from personal contacts. It includes critical information relating to sales opportunities or marketing conditions that can provide that extra edge over Canada’s competition. The federal government is committed to exploiting more fully the presence of our missions abroad in providing up-to-the-minute information on specific business opportunities and ensuring its effective dissemination to Canadian industry.

New guidelines will be implemented to provide more and better information and intelligence to Canadian companies as rapidly as possible. Government-wide sector expert groups are being created to guide this process.

Multilateral Development Banks

Despite Canada’s role as a leading donor to multilateral development banks (MDBs), such as the World Bank Group and several regional development banks, Canadian companies have not taken full advantage of associated procurement opportunities. Total lending from these institutions exceeds US\$40 billion a year, a significant portion of which could be of interest to Canadian suppliers.

The bidding process, while competitive, is reasonably standard and transparent. Much of the MDBs’ technical assistance focus involves sectors in which Canada is internationally competitive; this link is becoming stronger as the overall commitment to environmental sustainability increases.

To improve Canadian company performance, the government is establishing institution specialists to work more closely with Canadian suppliers. Options will also be investigated to develop a more integrated approach between DFAIT and CIDA to maximize Canadian participation on MDB projects.

Agri-Food Trade Specialists

To confront increasingly aggressive international competition and to take full advantage of emerging trade opportunities in the agri-food sectors, the Canadian government is placing additional agri-food trade and marketing specialists in priority markets abroad. These specialists will be dedicated to improving market access and expanding exports of Canadian agriculture and agri-food products and services. Specialists have already been placed in Japan, the Republic of Korea, Singapore, Taiwan and Mexico, and others will be appointed as a priority.

Conclusion

In order to revitalize the Canadian economy and put Canadians back to work, Canada must increase its share of global markets in the face of strong and growing competition. We must also attract greater foreign investment and encourage firms to take advantage of leading-edge technologies that provide the basis for competitive advantage.

The challenges and the opportunities are equally great. Success, and the resulting ability to achieve our full potential as a secure and prosperous society, will require the active commitment and applied wisdom of all concerned.

The federal government invites all Canadians to participate actively in the partnerships fostered through Canada’s ITBP, to help carry through its new approach to international business development.

Canada's International Trade Business Plan is made up of three components: a Strategic Overview, a series of industry sector strategies, and an accompanying series of international activities lists.

The main objectives of the plan are threefold:

- to strengthen the link between global opportunities and the supply capabilities of Canadian industry
- to bring greater coordination to federal (and increasingly provincial) international business development strategies, priorities and activities to ensure that public resources are utilized as efficiently as possible
- to ensure that federal international business development strategies and activities reflect the real needs of Canadian industry.

Available industry sectors strategies (and activities) include:

- | | |
|---|---|
| 1. Advanced Manufacturing Technologies | 11. Electrical and Energy Equipment <ul style="list-style-type: none">■ Electrical Equipment■ Oil and Gas Field Equipment |
| 2. Aeronautics | 12. Environmental Industries |
| 3. Agri-Food Products | 13. Fish and Seafood Products |
| 4. Arts and Cultural Industries | 14. Forest Industries |
| 5. Automotive | 15. Industrial Technologies <ul style="list-style-type: none">■ Agricultural Technology, Machinery and Equipment■ Mining — Forestry — Pulp and Paper■ Ocean and Marine Shipboard Technology |
| 6. Biotechnologies | 16. Information Technologies |
| 7. Business and Professional Services | 17. Medical and Health-care Products |
| 8. Chemicals and Plastics <ul style="list-style-type: none">■ Chemicals and Petrochemicals■ Plastics and Polymer Products | 18. Minerals, Metals, Advanced Materials and Construction Products |
| 9. Consumer Products <ul style="list-style-type: none">■ Apparel Industry■ Business and Institutional Furniture■ Footwear■ Hardware and Housewares■ Household Furniture■ Sporting Goods (including recreational watercraft)■ Textiles | 19. Space |
| 10. Defence and Related Products <ul style="list-style-type: none">■ Aviation, Marine and Defence Electronics■ Marine and Land Defence Systems | 20. Tourism |
| | 21. Urban Transit and Rail |

For information on how to receive additional copies of the Strategic Overview, or copies of industry sector strategies and international activities lists, please call: **1-800-267-8376**



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Canada's International Trade Business Plan

1994-1995

*An Integrated Plan for Trade, Investment
and Technology Development*



Doing Business Abroad



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ISBN 0-662-22067-6

PO PU 0035-93-01

Aussi disponible en français sous le titre Technologie de fabrication de pointe.



Advanced Manufacturing Technologies

Advanced manufacturing technologies (AMT) comprise computer-controlled and microelectronics-based machines such as industrial robots, computer-controlled machine tools, automated materials handling and assembly systems, instrumentation and computer-aided engineering (CAE) software, which are used in the design, manufacture and production control of products such as automobiles, electronics or aircraft.

International Environment

In 1990, worldwide investment in AMT products, services and systems was \$57 billion. It is estimated to be increasing at a compound annual growth rate of 13 percent and, by the year 2000, the market is forecast to be over \$200 billion. North America currently represents 53 percent of the world market. However, as Asian and European investment continues to grow, their share will increase to 52 percent by the year 2000.

Figure 1 shows projected AMT markets in major user countries, to the year 2000.

Japan and Germany are leading exporters of AMT products. Japan is a leader in producing machining centres, industrial robots and flexible manufacturing systems, while Germany has established a lead in precision-machining technologies and has built a strong export machine

tool industry. Companies using and supplying AMT in these two countries have developed a lead over their competitors, because of greater collaboration between firms and their ability to rapidly develop and apply new technologies. The U.S. dominates the factory systems market, primarily due to its strengths in software and computer hardware development.

In the next generation of manufacturing, AMT will bring design, production and inventory control together into integrated systems. Manufacturing processes will be simplified and new advanced automated equipment developed. The use of new materials is expected to accelerate, requiring advanced processing machinery. Following a Japanese proposal, Australia, Canada, Europe, Japan and the U.S. are cooperating in a joint technology development project, the Intelligent Manufacturing Systems (IMS) Program. Now in the feasibility stage, IMS aims to develop new technologies and establish international standards for the next generation of industrial technologies, while sharing the costs and risks.

Canadian Position

Canadian AMT companies include systems integrators, producers of machine tools, robot, automated manufacturing systems, plastic processing machines, instrumentation and manufacturing software developers.

There are approximately 500 AMT producers in Canada, and shipments are about \$2 billion. Exports are about 60 percent of output; imports in 1990 were \$1.4 billion. The sector employs

Figure 1 — Worldwide AMT Markets



Source: Industry Canada, *The Year 2000 Report*.

some 17 000 persons, including many skilled workers and professionals.

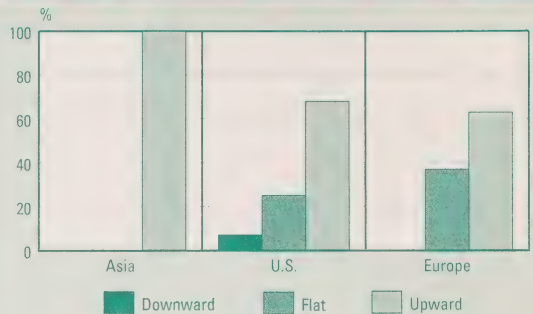
Figure 2 indicates the views of AMT producer firms company executives about opportunities in three key foreign markets areas. The left-hand scale indicates the percentage of persons interviewed who expressed one of the views indicated. Executives were unanimous in their views about the strong upward trend in markets in Asia. Most executives also felt that market trends in the U.S. and Europe were positive.

The major markets for Canadian products and services are countries with a modern manufacturing base. These markets include the U.S., western Europe, Japan, Latin America (primarily Mexico), Taiwan, the Republic of Korea, Malaysia, Hong Kong and Thailand. The Japanese and German markets remain difficult to penetrate because of users' preference in those countries for domestically manufactured products. Nevertheless, opportunities for exports exist in these markets, including factory software and machine vision products in Germany, and robotics and machine vision products in Japan. Canadian firms have had considerable success in the U.S., Mexico, the U.K., France and Italy, with the U.S. accounting for about 75 percent of Canadian exports.

Canadian manufacturers of AMT products are generally much smaller than their competitors in other countries. The largest Canadian firms report annual sales of between \$200 million and \$300 million. Competitor firms such as Allen-Bradley, Mitsubishi and Siemens have sales many times greater, and have established international marketing channels.

Successful fast-growing Canadian firms have invested in developing proprietary technologies, pursued niche marketing strategies, and sell the bulk of their products in overseas markets. An example is Orchid Automation Group Inc. of Cambridge, Ontario, founded in 1988. It has developed sophisticated technology for quick die changing and is projecting sales of \$8 million this year, of which 90 percent will be exports. Canadian

Figure 2 — Opportunities in Key Foreign Markets *



*Based on interviews conducted in 1990-91.
Source: Industry Canada.

firms which do little R&D and serve only the domestic market are in many cases in decline.

The AMT Initiative of Industry Canada has as its objective the development of a strong, technically advanced, export-oriented AMT producer sector. It provides financial support for product and technology development of leading-edge products and services, and for human resource studies, mini-networks, international market studies, industry/university research projects and senior manager exchanges.

Strategic Direction

The key to the long-term growth of the AMT sector is the continued development of leading-edge products, through research conducted individually and within domestic and international consortia, coupled with careful market research and intelligence and aggressive sales efforts in existing and new market areas.

The goal is to increase shipments by the year 2000 to \$4 billion, through sales to existing markets in Canada and the U.S., and through the development of new markets in Europe, Mexico and Asia.

To achieve this goal, the government in cooperation with industry, will:

- assist companies to identify and take advantage of opportunities, emerging markets, technology shifts and potential threats through market-watch efforts in key posts; market opportunity analysis and identification will be supported through the Program for Export Market Development (PEMD), and through market studies funded under the AMT Initiative
- support company efforts at technological enhancement and product development, through the AMT Initiative, and through the Industrial Research Assistance Program (IRAP), which is administered by the NRC
- prepare companies for participation in exporting to and partnering in international markets, through missions to selected foreign markets, such as France, Italy, Germany and Japan; the Japan Science and Technology Fund, which is administered by Industry Canada, supports AMT research projects undertaken by Canadian companies in conjunction with companies and technology institutes in Japan
- support international consortia research into the advanced factory technologies of the next century; through Information Management Systems (IMS), Canadian industrial firms, universities and institutions are participating in six international consortia projects in the area of industrial technology development
- conduct a study of the Mexican market for AMT products under the Access North America Program, directed by DFAIT.

References

- Material relevant to the sector analysis and the strategy: *Phase III Implementation Proposal*, available through the Manufacturing and Processing Technologies Branch of Industry Canada; News Release *Canada Part of Group Studying International Cooperation in Advanced Manufacturing* (IMS), available through the Manufacturing and Processing Technologies Branch or the Canadian Manufacturers' Association and *The Year 2000 Report*, available through the Manufacturing and Processing Technologies Branch.
- Specific information on program elements of the AMT Initiative are available through Industry Canada regional offices.

Contact

Advanced Manufacturing
Technologies Directorate
Manufacturing and Processing
Technologies Branch
Industry Canada
Tel.: (613) 954-3249
Fax: (613) 941-2463

Advanced Manufacturing Technologies

Activity	Date	Location	Dept.	Contact
Africa and the Middle East				
Capital Project Mission/Primary & Secondary Machinery	Sep 1994	Saudi Arabia*	DFAIT	(613) 944-5984
International Packaging and Printing Show	Oct 1994	Johannesburg, South Africa	DFAIT	(613) 944-6590
Incoming Buyers to Toronto	Nov 1994	Toronto, Ontario	DFAIT	(613) 944-5984
Packaging & Printing Machineries & Equipment Fair	Feb 1995	Tehran, Iran	DFAIT	(613) 944-7029
Tehran International Trade Fair (Machinery & Equipment)	Oct 1995	Tehran, Iran	DFAIT	(613) 944-7029
Asia Pacific South				
Advanced Manufacturing Mission to India	Nov 1994	New Delhi, India Bombay, India Bangalore, India	DFAIT	(613) 996-5903
11th Indian Engineering Trade Fair (IETF)	Feb 1995	New Delhi, India	DFAIT	(613) 996-5903
Central/Eastern Europe and the Commonwealth of Independent States				
BRNO International Engineering Fair '94	Sep 1994	Prague, Czech Republic	DFAIT	(613) 996-7107
East Asia				
Taipei International Automation & Precision Machinery Show	May 1994	Taipei, Taiwan	DFAIT	(613) 996-7582
Metal Industry Production Automation Technology Transfer	Nov 1994	Taipei, Taiwan	DFAIT	(613) 996-7582
Latin America and the Caribbean				
Expopac '94	May 1994	Mexico City, Mexico	DFAIT	(613) 996-5358
Bogota International Fair '94	Jul 1994	Bogota, Columbia	DFAIT	(613) 996-5358
Havana International Fair '94	Nov 1994	Havana, Cuba	DFAIT	(613) 996-5358
Mexiplast '94	Nov 1994	Mexico*	DFAIT	(613) 996-5358
Expocomer '95	Mar 1995	Panama*	DFAIT	(613) 996-5358
Multiple Markets				
Business Opportunities Seminars	May 1994	Vancouver, B.C. Edmonton, Alberta Winnipeg, Manitoba Toronto, Ontario Montreal, Quebec Halifax, Nova Scotia	DFAIT	(613) 996-6188
International Manufacturing Technology Show (IMTS '94)	Sep 1994	Chicago, Illinois	Industry Canada	(613) 954-3244

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
United States				
North American Material Handling Show	Apr 1994	Detroit, Michigan	DFAIT	(613) 944-9475
Powder & Bulk Solids Conference/Exposition	May 1994	Chicago, Illinois	DFAIT	(613) 944-9475
National Plastics Expo	Jun 1994	Chicago, Illinois	DFAIT	(613) 944-7486
Graphexpo East '94	Sep 1994	Philadelphia, Pennsylvania	DFAIT	(613) 944-9475
U.S. Certification of Heating, Ventilation and Air Conditioning (HVAC) Products	Nov 1994	Canada*	DFAIT	(613) 944-7486
Packaging Machinery Manufacturers Institute (PMMI) Pack Expo	Nov 1994	Chicago, Illinois	DFAIT	(613) 944-9475
Incoming Mission to Canadian Mold Makers and Related Products	Dec 1994	Detroit, Michigan	DFAIT	(613) 944-7486
American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE)	Jan 1995	Houston, Texas	DFAIT	(613) 944-7486
ProMat '95	Feb 1995	Chicago, Illinois	DFAIT	(613) 944-9475
Western Europe and European Community				
Propack — Related to Food Processing and Packaging	May 1994	Brussels, Belgium	DFAIT	(613) 995-6440
MoldExpo '94	Sep 1994	Oyonnax, France	Industry Canada	(416) 973-5176

* Exact dates and/or cities to be determined.

Canada's International Trade Business Plan is made up of three key components: a Strategic Overview, a series of industry sector strategies, and an accompanying series of international activities lists. Industry sectors available include:

1. Advanced Manufacturing Technologies
2. Aeronautics
3. Agri-Food Products
4. Arts and Cultural Industries
5. Automotive
6. Biotechnologies
7. Business and Professional Services
8. Chemicals and Plastics
 - Chemicals and Petrochemicals
 - Plastics and Polymer Products
9. Consumer Products
 - Apparel Industry
 - Business and Institutional Furniture
 - Footwear
 - Hardware and Housewares
 - Household Furniture
 - Sporting Goods (including recreational watercraft)
 - Textiles
10. Defence and Related Products
 - Aviation, Marine and Defence Electronics
 - Marine and Land Defence Systems
11. Electrical and Energy Equipment
 - Electrical Equipment
 - Oil and Gas Field Equipment
12. Environmental Industries
13. Fish and Seafood Products
14. Forest Industries
15. Industrial Technologies
 - Agricultural Technology, Machinery and Equipment
 - Mining — Forestry — Pulp and Paper
 - Ocean and Marine Shipboard Technology
16. Information Technologies
17. Medical and Health-care Products
18. Minerals, Metals, Advanced Materials and Construction Products
19. Space
20. Tourism
21. Urban Transit and Rail

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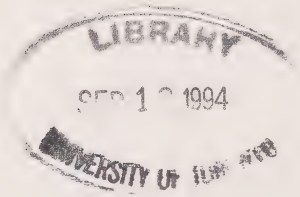
Canada's International Trade Business Plan

1994-1995

***An Integrated Plan for Trade, Investment
and Technology Development***



Doing Business Abroad



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Aussi disponible en français sous le titre Aéronautique.

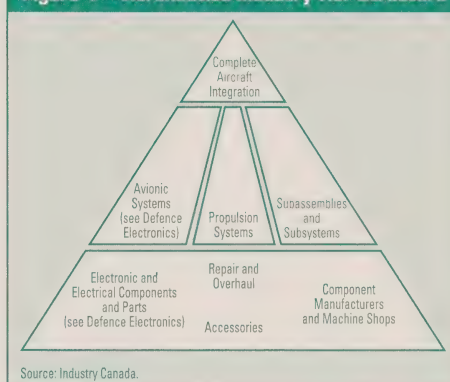


Aeronautics

The aeronautics sector comprises firms that design, develop, manufacture and/or market aircraft, aircraft systems, subsystems and parts, and provide support services such as repair and overhaul (R&O). (Avionics is covered in Defence and Related Products — Aviation, Marine and Defence Electronics.)

As Figure 1 shows, the aeronautics industry has a three-tier structure. Aircraft manufacturers with a full systems integration capability make up the first tier. Second-tier firms produce integrated systems, including propulsion systems, landing gear and major structural components such as wings, tail sections and fuselage sections. Third-tier firms manufacture airframe components and provide support services. First and second-tier suppliers are often represented by on-site sales agents and are generally aware of market conditions and opportunities. Third-tier suppliers market to the first and second-tier companies, as well as to end users.

Figure 1 — Aeronautics Industry Tier Structure



International Environment

In 1991, the output of the aerospace industries in the world's eight largest aerospace manufacturing countries¹ (excluding the output of the former

U.S.S.R.), totalled \$240 billion. Canada's aerospace¹ output in both 1991 and 1992 was \$8.4 billion, about 3.3 percent of the total output of the western world. As indicated in Figure 2,

Figure 2 — Key Players in the World Aeronautics Market, 1991



Source: *The European Aerospace Industry: Trading Position and Figures*, Commission of the European Communities, Directorate-General, Internal Market and Industrial Affairs, Brussels, Belgium, 1993 (pp. 188-189).

¹ Based on aerospace data, as statistics for aeronautics are not readily available for most foreign countries.

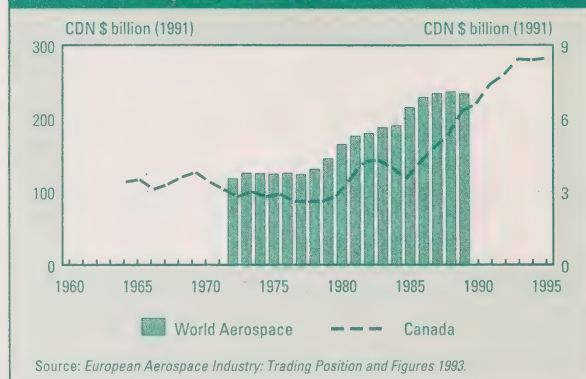
Canada is the fifth largest aeronautics exporter in the western world. Moreover, since the mid-1970s, Canada's aerospace¹ output has grown more rapidly than that of any other leading aerospace country (see Figure 3).

From 1989 to 1991, airlines and aircraft leasing companies placed unprecedented orders for new aircraft. The slowing of traffic growth due to the recession resulted in airline overcapacity and enormous financial losses for airlines. Demand for new civil transports plummeted. Most observers, however, continue to forecast strong underlying demand for civil transports over the next 15 years.

A recent study² of senior aerospace and defence executives stated, "defence spending is in a tailspin worldwide ... Downsizing of defence is a permanent reshaping. The prospect of world peace is creating a lower level of need for ... defence products. And industry's ability to adjust to this level is further aggravated by the state of the civil aerospace industry. In previous cycles, downturns in civil aerospace were buffered by defence spending in many parts of the globe ... The intensity of competition demands that companies and their suppliers become more efficient, more cost competitive in pursuit of high technology. All of this will require the formation of new relationships which were previously unthinkable due to factors such as national security interests, competitive risks, and protected technologies."

These factors are expected to lead to a major worldwide restructuring of the aeronautics industry. Restructuring is expected to be most profound in the highly fragmented regional aircraft manufacturing industry. Canadian industry is concentrated and has a strong competitive position in this segment. Bombardier has led the restructuring with its acquisition of de Havilland and the integration of its Canadian operations into its international aerospace interests.

Figure 3 — Canada's Aerospace Sector: Growth Compared to World



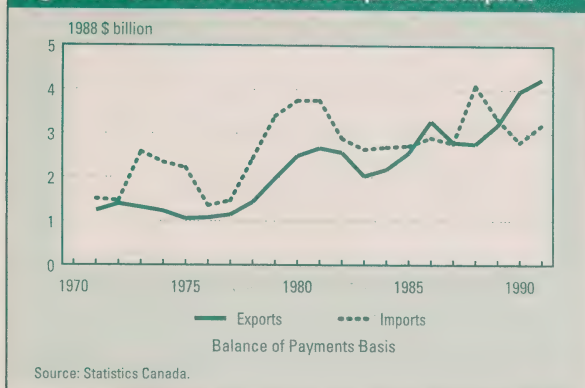
The aeronautics R&O industry is in better shape than its manufacturing counterpart. In the short term, airline overcapacity is leading to storage of functional aircraft. Used aircraft prices are declining as a result, providing a basis for economic conversion or upgrading of the aircraft to meet new environmental and safety regulations and improved operating costs. Over the longer term, the world's airline fleet is expected to grow substantially and the expanded fleet will require R&O support. In the U.S., military R&O opportunities are expanding as military bases and repair centres are closed and R&O is increasingly contracted out to the private sector. Through the Defence Production Sharing Arrangement/ Defence Development Sharing Arrangement, the Canadian aeronautics industry has a unique opportunity to access this market.

The major area of growth in demand over the next few years is projected to be the Pacific Rim. British Aerospace, for example, predicts that defence spending in the Asia-Pacific region will overtake that of western Europe and equal approximately two thirds of U.S. spending by

¹ Based on aerospace data, as statistics for aeronautics are not readily available for most foreign countries.

² Ernst & Young, *International Aerospace and Defence Research Study*, New York, New York, 1993.

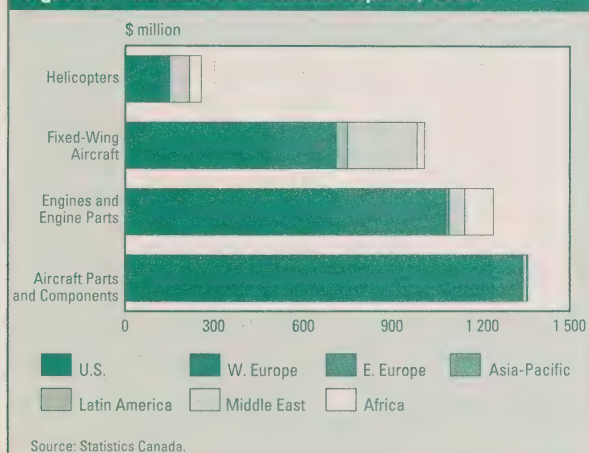
Figure 4 — Canada's Aeronautics Exports and Imports



China is expected to experience rapid growth in its GDP. Throughout the world, air traffic growth is strongly linked to GDP. Constraints to rapid expansion of China's infrastructure for other modes of transport should result in exceptionally high rates of growth for air travel.

Former Warsaw Pact countries possess advanced aeronautics technologies and highly skilled, well-trained, low-paid workers, technologists and engineers. Their ability to organize, manage and globally market these assets competitively remains an open question, however. French and German aeronautics organizations have been particularly active in establishing linkages with their counterparts in these countries.

Figure 5 — Canada's Aeronautics Exports, 1990



Canadian Position

Canada's aerospace¹ industry is focused primarily on civil markets, which accounted for 69 percent of its sales in 1992. Most of its foreign competitors depend on military markets for 50 to 70 percent of their sales. Although Canada's aeronautics industry has not been as directly affected as its competitors by declining defence budgets, it is facing increasing competition in civil markets as defence-oriented foreign aeronautics firms move to redirect their production.

Canada's aeronautics industry is internationally competitive. Since 1985, it is one of the few Canadian high-technology industries to have a cumulative trade surplus (see Figure 4). Indeed, in 1991, Canada was the only nation in the world to register a trade surplus in aerospace products with the U.S.

As Figure 5 shows, the U.S. is the principal market for Canada's helicopters, fixed-wing aircraft, engines and engine parts, and aircraft parts and components. Canada's next largest markets are Europe, particularly for engines and

2010. Boeing forecasts Pacific Rim air travel to grow at 7 percent annually compared to 5 percent in the rest of the world. Many of these countries are also expected to use their foreign exchange surpluses to encourage the development of their aeronautics industries to meet this growing demand.

¹ Based on aerospace data, as statistics for aeronautics are not readily available for most foreign countries.

engine parts, and the Asia-Pacific region, which is a sizable market for fixed-wing aircraft and helicopters.

The Canadian aerospace industry exports 72 percent of its \$8.4 billion annual sales and employs approximately 59 000 people. Canadian aeronautics companies are among the world leaders in regional aircraft, business aircraft and surveillance systems (Bombardier), small turbine engines (Pratt & Whitney Canada), and civil helicopters (Bell Helicopter Textron Canada). The industry also has a strong infrastructure of smaller suppliers of a wide range of specialized aeronautics systems, subsystems and components, and a thriving service segment.

Bombardier, the parent company of Canadair and de Havilland, is a major Canadian-controlled global player in aeronautics. Canadair and de Havilland (the Bombardier Regional Aircraft Division [BRAD]) have the largest world-market share of deliveries and orders in the 30 to 50-seat turboprop and jet segment. Canadair's Challenger is one of the best-selling large corporate jets in the world; this, together with the Learjet line, gives Bombardier the broadest product line of any business jet manufacturer. The company also manufactures and markets the CL-215T/415 waterbomber and militarized versions of this popular amphibian aircraft.

Canadair and de Havilland are working actively to develop a new long-range executive jet, the Global Express, and a large high-speed turboprop, the Dash 8-400. They are also developing a new longer-range, enhanced version of the Challenger, the 601/4B, and, with their affiliated companies, Shorts and Learjet, the Learjet 45 business jet.

Bell Helicopter Textron Canada designs, develops, manufactures and markets Bell's entire line of civil helicopters.

Pratt & Whitney Canada has a 30-percent share of the world market for small turbine engines (used by regional aircraft, general aviation, military utility/trainers and helicopters) and is

well-positioned to realize its goal of expanding that share to 40 percent in the coming decade.

Dowty, Menasco and Heroux design, develop and manufacture landing gear. Allied-Signal designs and manufactures engine controls and aircraft environmental systems. McDonnell Douglas Canada Ltd. produces the wings for all of Douglas Aircraft Company's large commercial aircrafts and some military models and is actively seeking to broaden its production base.

Boeing Canada manufactures composite airframe structures.

Smaller operations manufacture aeronautics components or subassemblies, provide R&O, aircraft re-engining and conversion services. Several firms have highly competitive capabilities for the R&O and support of specific military airframe platforms, such as the CF-5 and the CF-18. Companies in this category include Bristol Aerospace, Conair, Standard Aero, Field Aviation, Kelowna Flightcraft, IMP, Canadair and CAE Aviation. In addition, Conair and Canadair provide complete forest-fire control systems and services to complement their firefighting aircraft.

A number of Canadian firms also produce light and ultralight aircraft, mostly for the private flyer/recreational market. Some of these firms produce complete aircraft or aircraft kits, while others specialize in engines or floats. Because product liability costs have driven small general aviation manufacturers from this segment of the market, many observers believe that there is a pent-up demand for these products. Changes in certification standards and possible revisions to product liability laws could unleash this demand.

The main competitive strengths of Canada's aeronautics industry are rooted in its early conversion from defence to commercial production and the strong international focus Canada developed to compensate for its limited domestic market. As a result of these factors, Canada's aeronautics industry has achieved a leading position in a limited range of niche

markets for specialized aircraft and systems, largely in commercial sectors. Many foreign firms are seeking to emulate Canada's success in penetrating foreign commercial aeronautics markets as their own protected domestic defence markets shrink.

Canada's aeronautics industry faces difficult challenges in the 1990s. Key challenges include shrinking defence markets and highly cyclical commercial markets. Canadian firms are not as large as most of their international rivals, nor do they have protected domestic markets and direct government investment, as do those countries that see their aeronautics companies as "national champions." Canadian companies therefore lack the resources that many foreign firms rely on to endure a sustained downturn. Moreover, fiscal pressures may limit the extent to which Canada can level the playing field. In this environment, Canadian aerospace companies will be challenged to maintain the effectiveness of their R&D efforts — the cornerstone of their long-term competitiveness.

Strategic Direction

- Aerospace Industries Association of Canada Priority Countries
 - The Aerospace Industries Association of Canada (AIAC) has established a list of target countries for sales support by Canada's embassies and consulates, in order of priority as follows: the U.S., France, Japan, the Republic of Korea, Turkey, Taiwan, CIS, China, the U.K., Italy and Indonesia. The AIAC would also appreciate market information and intelligence from all these countries, with the exception of the U.S. where other sources of information are available.
- Market Imperfections
 - Monitor international subsidy programs and non-tariff barriers through our embassies and consulates and in inter-

national fora, including GATT, to identify details of foreign government direct and indirect support and sales financing, in the context of industry restructuring, divestitures or responses to protect a "national asset." (DFAIT, Posts, Industry Canada)

- Work towards developing a consensus on a balanced approach to limiting subsidies on aircraft, engines and components so that Canada maintains some flexibility to discipline or offset a wide range of foreign government subsidy instruments. (DFAIT, Industry Canada)

■ New Aircraft Programs

- Posts will provide information on aeronautics firms that are developing or about to develop new aircrafts or engines. (DFAIT, Industry Canada)

■ New Long-term Markets

- Promote, encourage and facilitate the penetration of Pacific Rim markets, particularly the rapidly growing civil aerospace market in China and other key markets such as Singapore and Australia.
- Explore opportunities for collaboration with Taiwan and Japanese aerospace firms to determine if there is a basis for mutually beneficial strategic linkages. (DFAIT, Industry Canada)
- Posts will provide information on aerospace market developments in the former U.S.S.R. and Eastern Bloc. (DFAIT, Posts)

- Support business associations such as the CUBC (formerly the Canada-U.S.S.R. Business Council), to forge contacts between industries in the former U.S.S.R. and Canadian companies and organize fact-finding missions to the area as appropriate. (DFAIT, Industry Canada)
- Increase Canada's penetration of Saudi markets to take advantage of opportunities to market regional aircraft, executive jets (particularly the Global Express), R&O and support services.
- Repair and Overhaul
 - Provide marketing support to companies to pursue military and civil R&O opportunities worldwide, with particular emphasis on the U.S. military side (DFAIT, Posts, Industry Canada), and on matching Canadian industry strengths on specific airframe platforms with identified foreign market opportunities.
 - Update the existing Global Market Opportunity Review on Aircraft Repair and Overhaul which identifies related military, civil and general aviation opportunities. (DFAIT, Industry Canada)
- Procurement
 - Seek long-term benefits through Industrial and Regional Benefits strategies on government procurements to compensate for structural market imperfections in the international arena. (Industry Canada)

References

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- Ernst & Young, *International Aerospace and Defence Research Study*, New York, New York, 1993.
- Prosperity Initiative, *Prosperity Consultations, Aerospace and Defence Sectors*
- Statistics Canada, *World Trade Database 1980-91, Aircraft and Associated Equipment and Parts, Exports and Imports by Country*

Contact

Airframe Systems Division
Aeronautics Branch
Industry Canada
Tel.: (613) 954-3197
Fax: (613) 996-6703

Aeronautics

Activity	Date	Location	Dept.	Contact
Asia Pacific South				
Defence Services Asia Show	Apr 1994	Kuala Lumpur, Malaysia	DFAIT	(613) 996-3667
Strategic Initiatives	Mar 1995	Canberra, Australia	DFAIT	(613) 996-1052
East Asia				
Avionics Seminar	Jul 1994	Taipei, Taiwan	DFAIT	(613) 996-7582
Airport/Aviation Seminars	Oct 1994	Shanghai, China	DFAIT	(613) 995-6962
Avionics Incoming Mission	Nov 1994	Canada*	DFAIT	(613) 996-7582
Multiple Markets				
Japan International Aerospace Exhibition '95 (JA '95)	Feb 1995	Tokyo, Japan	DFAIT	(613) 995-8596
United States				
Canadian Aerospace Companies Display	Jun 1994	Dayton, Ohio	DFAIT	(613) 944-9481
Industry Visit to Rome Air Force Base (AFB), Buffalo	Jun 1994	Buffalo, New York	DFAIT	(613) 944-9481
SPCC, ASO	Jun 1994	Philadelphia, Pennsylvania	DFAIT	(613) 944-9481
Subcontractors VII	Jun 1994	Montreal, Quebec	DFAIT	(613) 944-9481
Canadian Technology Innovation/USAF	Sep 1994	Dayton, Ohio	DFAIT	(613) 944-9481
National Business Aircraft Association	Sep 1994	New Orleans, Louisiana	DFAIT	(613) 944-9481
Defence Conversion Workshop	Oct 1994	Atlanta, Georgia	DFAIT	(613) 944-9481
Warner Robbins AFB	Oct 1994	Atlanta, Georgia	DFAIT	(613) 944-9481
Aerospace Industries Association of Canada (AIAC) Incoming Mission	Nov 1994	Atlanta, Georgia	DFAIT	(613) 944-9481
Incoming United States Air Force (USAF) R&D Mission	Nov 1994	Canada*	DFAIT	(613) 944-9481
Repair & Overhaul Mission to Territory	Nov 1994	St. Louis, Missouri	DFAIT	(613) 944-9481
Canada Day at Wright Patterson Air Force Base	Jan 1995	Dayton, Ohio	DFAIT	(613) 944-9481
COMPAD Army Troop Command	Jan 1995	St. Louis, Missouri	DFAIT	(613) 944-9481
Helicopter Association International	Jan 1995	Los Angeles, California	DFAIT	(613) 944-9481

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
Western Europe and European Community				
Aerospace Equipment Mission	TBD*	Vienna, Austria	DFAIT	(613) 995-9766
Aeronautics & Space Mission	May 1994	Paris, France Toulouse, France	DFAIT	(613) 996-3607
Aerospace Mission to Spain	May 1994	Madrid, Spain	DFAIT	(613) 995-6440
ILA '94 (Aerospace)	May 1994	Berlin, Germany	DFAIT	(613) 943-0611
Mission/Defence Aero	Sep 1994	Helsinki, Finland	DFAIT	(613) 995-4730
Farnborough International '94	Sep 1994	Farnborough, England	DFAIT	(613) 996-3607
Air Forum	Oct 1994	Geneva, Switzerland	DFAIT	(613) 996-3607
Defendory	Oct 1994	Athens, Greece	DFAIT	(613) 996-5263

* Exact dates and/or cities to be determined.

Canada's International Trade Business Plan is made up of three key components: a Strategic Overview, a series of industry sector strategies, and an accompanying series of international activities lists. Industry sectors available include:

1. Advanced Manufacturing Technologies
2. Aeronautics
3. Agri-Food Products
4. Arts and Cultural Industries
5. Automotive
6. Biotechnologies
7. Business and Professional Services
8. Chemicals and Plastics
 - Chemicals and Petrochemicals
 - Plastics and Polymer Products
9. Consumer Products
 - Apparel Industry
 - Business and Institutional Furniture
 - Footwear
 - Hardware and Housewares
 - Household Furniture
 - Sporting Goods (including recreational watercraft)
 - Textiles
10. Defence and Related Products
 - Aviation, Marine and Defence Electronics
 - Marine and Land Defence Systems
11. Electrical and Energy Equipment
 - Electrical Equipment
 - Oil and Gas Field Equipment
12. Environmental Industries
13. Fish and Seafood Products
14. Forest Industries
15. Industrial Technologies
 - Agricultural Technology, Machinery and Equipment
 - Mining — Forestry — Pulp and Paper
 - Ocean and Marine Shipboard Technology
16. Information Technologies
17. Medical and Health-care Products
18. Minerals, Metals, Advanced Materials and Construction Products
19. Space
20. Tourism
21. Urban Transit and Rail

For information on how to receive the Strategic Overview, or additional industry sector strategies and international activities lists, please call: **1-800-267-8376**



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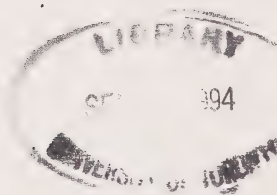
Canada's International Trade Business Plan

1994-1995

***An Integrated Plan for Trade, Investment
and Technology Development***



Doing Business Abroad



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Agri-Food Products

Agri-food products include primary products such as livestock, grains and value-added products such as processed foods and beverages. Agriculture machinery and equipment and agricultural services are discussed in other chapters.

International Environment

The total value of world agri-food trade was US\$352 billion in 1992. A liberalized trading environment resulting from the GATT negotiations made the sector more prominent in the global economy. The major exporting countries in 1992 were the U.S. (US\$48 billion), France (US\$36 billion), the Netherlands (US\$34 billion), Germany (US\$22 billion) and the U.K. (US\$15 billion). Canada's exports of \$13.3 billion in 1992 accounted for approximately 3.1 percent of world trade in agri-food products.

The U.S. and the EC are the major players in primary agricultural commodities. Export subsidy wars between them have led to overproduction and depressed world prices for primary commodities.

Value-added products such as meat, bakery goods and dairy products are the largest, fastest-growing and most profitable part of the global agri-food business.

The following trends are changing the nature of the global agri-food market:

- increasing demand for convenient, high-quality products for the restaurant and consumer markets
- the aging of the North American and European populations, which will increase the demand for products that meet health concerns and are available in smaller portions
- increasing demand in North America, Japan and Europe for products that meet nutritional needs and food safety concerns, and low-calorie, low-cholesterol and health-conscious products in environmentally friendly packages

- growing world population and expanding middle class in many countries such as India and the Association of South East Asian Nations (ASEAN), which are increasing the demand for primary products such as grains and pulses
- higher dietary use of animal protein in Japan, the Republic of Korea, Taiwan, Hong Kong and Singapore, creating new markets for processed food products.

Canadian Position

The agri-food sector accounts for 4.8 percent of Canada's GDP. Food processing employs nearly one million Canadians in distribution, retail and food services. It accounts for over \$2 billion in new investment annually. Primary agriculture employs 450 000 people and creates additional jobs in the transportation, equipment and services sectors.

Given the small domestic market, Canada's agri-food industry is more export-dependent than that of the U.S. In 1991, our per capita exports were \$340 compared to \$177 for the U.S.

A major challenge facing the value-added sector is adequate supply capability to give potential customers the assurance required to change suppliers, and domestic processors the confidence to expand Canadian facilities. Canada enjoys an international reputation as a reliable supplier of quality products. Canada's competitive strengths lie in the excellent quality, diversity and uniqueness of products (e.g. wild rice, canola and maple syrup), coupled with strict phytosanitary/health regulations in the production and movement of agricultural products. Canadian grains and oilseeds are world-renowned for their consistently high quality.

Efficient producers, backed by a world-class research and extension system and infrastructure, ensure reliable production levels and delivery of primary products.

The U.S. continues to be our most important export market for processed and semi-processed agri-food products. From 1990 to 1992, Canadian agri-food exports to the U.S. increased by 37.5 percent to \$6 billion. The total U.S. agri-food imports went up by 8.1 percent to \$21 billion during the same period (AG CAN). The implementation of NAFTA on January 1, 1994, effectively created a single market of 360 million people.

Japan represents a significant opportunity for Canadian exporters of value-added products; Japan's demand for quality meats and meat products is rising steadily, for example.

Western Europe is an established and reliable market but any increase in exports will depend on the resolution of market access issues. The Russian and the eastern European markets have a long-term potential. There are opportunities in eastern Europe for the sale of livestock genetics.

In the Middle East, major existing markets are Iran, Algeria and Saudi Arabia; and in Latin America, Venezuela, Brazil, Mexico and Colombia are important primary product markets.

Strategic Direction

The long-term objective of Canada's strategy is to expand the Canadian share of world agri-food trade from the current 3.5 percent (\$13.3 billion) to 5 percent (\$20 billion) by the year 2000. This goal will be attained through the strategic actions listed under the four headings below.

International Competitiveness

International competitiveness of Canadian agri-food companies and the industry will be enhanced by:

- using programs such as the Agri-Food Research and Development Matching Investment Initiative and Getting Ready to Go Global to help producers and

companies tailor their products/production to meet foreign market requirements (ITCs, AG CAN)

- improving the competitiveness of small and medium-sized enterprises (SMEs) by creating a professional resource pool composed of industry and government officials; the companies can use the pool's resources for short terms on a cost-shared basis to develop strategic plans and to conduct market assessments (AG CAN, Federal/Provincial Market Development Council, Sectoral Advisory Group on International Trade by January 1995)
- building stronger ties between associations and the government by assigning additional trade officers through the Interchange Canada Program and other arrangements to associations requiring assistance (DFAIT, AG CAN)
- encouraging SMEs to form networks and consortia for marketing to ensure adequate supply capabilities and market access (ITCs)
- helping industry and its associations to develop generic promotional tools, e.g., a National Directory of Food Product Exporters, to maximize exposure in foreign markets with minimum risk and a "Quality from Canada" program with promotional material and application mechanisms (DFAIT, AG CAN)
- resolving domestic issues identified by industry as having an adverse effect on our international competitiveness (inter-provincial trade barriers, shortage of trade development funds versus domestic production support programs, etc.) through the Committee of Ministers on Internal Trade (CMIT, July 1995)
- encouraging SMEs to use programs such as New Exporters to Border States (NEBS) and New Exporters to Mexico (NEWMEX) and the marketing capabilities of multi-nationals and trading houses to increase the volume and the value of exports (ITCs)

- using the Forum for International Trade Training (FITT) to prepare Canadians for export marketing; specialized training facilities such as the Canadian International Grains Institute, International Livestock Management Schools and the International Red Meat Training Initiative will enhance development of new markets and maintenance of existing markets (DFAIT, AG CAN)
- encouraging investment and strategic alliances in Canada by foreign companies to obtain better access to international markets and to improve supply capabilities. (DFAIT, Industry Canada)
- promoting technology inflow by working with NRC's Industrial Research Assistance Program (IRAP) and the network of industry technology advisers, together with technology counsellors and other staff in Canadian missions, to actively promote technology inflow (NRC, DFAIT)
- conducting an analysis to determine the need for establishing a tax credit system on sales to foreign markets to maintain international competitiveness of Canadian exporters. (DFAIT, AG CAN, December 1994)
- developing sector teams to act as the government contact points for all priority sectors and subsectors to improve communication between government and industry by identifying government contact points (DFAIT, AG CAN)
- giving priority to incoming missions that are more cost-effective in the sector over outgoing missions; outgoing missions will be smaller (two to three members) (DFAIT, AG CAN)
- using the Federal/Provincial Market Development Council to promote cooperation between the federal government departments and the provinces (DFAIT, AG CAN)
- actively promoting the idea of co-location, electronically or physically, of the regionally based federal and provincial staff to improve service to industry; a report on the concept will be prepared for the federal and the provincial ministers (DFAIT, Industry Canada, AG CAN)

Market Information and Intelligence

The delivery of quality market information and intelligence will be enhanced by:

Streamlining and Coordination

Government will support industry-led plans for carrying out market development activities by:

- ensuring that the strategies of industry associations, developed as part of the Agri-Food Industry Market Strategies (AIMS) are incorporated into the planning process; additional industry associations, especially the value-added ones, will be encouraged to get involved in the AIMS process (DFAIT, AG CAN)
- using industry strategies as a basis for synergy among sectors (e.g. dairy genetics/feed industry/equipment) to present a complete "Canadian Package" to prospective buyers (DFAIT, Industry Canada, AG CAN)
- developing a national trade show directory of major events having federal, provincial and industry participation covering a two to three-year period (DFAIT, AG CAN)
- providing industry with "single window" access to information on government services through the Canada Business Service Centres (Industry Canada)
- identifying the type of information and intelligence the industry requires through an industry survey (AG CAN)
- installing electronic bulletin boards and fax on demand for faster and effective distribution of information; preparing global market opportunity reviews for specific products, e.g., pork, beef. (DFAIT, AG CAN)

Trade Policy and Market Access

The key market access and regulatory issues will be resolved by:

- supporting Canadian companies' efforts to enter the European market; phytosanitary (e.g. seed potatoes — Mexico) and animal health standards (e.g. bovine semen — Italy) will be monitored closely to ensure early identification of any changes that could affect market access issues and swift response by experts of the Canadian government (DFAIT, AG CAN)
- continuing the regulatory review process to amend or to eliminate those regulations that discourage investment and production in Canada or have an adverse impact on Canada's international competitiveness (DFAIT, AG CAN)

- monitoring the developments in international standards setting, such as ISO 9000; this intelligence will be disseminated to Canadian companies to enable them to harmonize their products with the rest of the world. (DFAIT, ITCs)

Note: Dates assigned to strategic activities are target dates.

Contact

Sectoral Liaison Secretariat
 Department of Foreign Affairs and
 International Trade
 Tel.: (613) 996-3644
 Fax: (613) 943-1103

Agri-Food Products

Activity	Date	Location	Dept.	Contact
Africa and the Middle East				
Mission with Seminars in Algeria	TBD*	Algeria*	DFAIT	(613) 944-8134
Outgoing Canola Oilseed Mission	Apr 1994	Saudi Arabia*	DFAIT	(613) 944-5984
Processed Food/Reconnaissance Mission	Apr 1994	South Africa*	OMAF	(416) 326-3510
Dryland Farming Technology Seminar	May 1994	Tehran, Iran	DFAIT	(613) 944-7029
Incoming Mission to Western Canada Farm Progress Show	Jun 1994	Canada*	DFAIT	(613) 944-6994 (613) 944-7029
Incoming Agriculture Mission (Potatoes)	Jul 1994	Canada*	DFAIT	(613) 944-6994
Outgoing Agri-Food Products & Machinery Mission	Jul 1994	Jordan* West Bank*	DFAIT	(613) 944-6994
In-Store Promotion of Canadian Food Products	Sep 1994	Kuwait*	DFAIT	(613) 944-6847
Roundtable — South Africa Trade Opportunities	Sep 1994	South Africa*	OMAF	(416) 326-3510
Outgoing Processed Foods Mission	Oct 1994	Middle East* South Africa*	OMAF	(416) 326-3510
Outgoing Mission & Saudi Agriculture Show	Oct 1994	Riyadh, Saudi Arabia	DFAIT	(613) 944-5984
Incoming Agri-Food Mission from Tunis, Algiers, Rabat	Nov 1994	Tunis, Tunisia Algiers, Algeria Rabat, Morocco	DFAIT	(613) 944-8134
Mission of Buyers/Royal Winter Fair '94	Nov 1994	Toronto, Ontario	DFAIT	(613) 944-6994
Outgoing Mission & Saudi Food '95	Jan 1995	Riyadh, Saudi Arabia	DFAIT	(613) 944-5984
Asia Pacific South				
Grains & Oilseeds Processing Equipment Mission	TBD*	Pakistan*	DFAIT	(613) 992-0952
Food & Hotel Asia Info Booth	Apr 1994	Singapore	DFAIT	(613) 996-5824
Halal Inspection Mission to Canada	May 1994	Canada*	DFAIT	(613) 996-5824
Indonesian Packaging & Food Products Show	May 1994	Indonesia*	DFAIT	(613) 996-7256
Mission to Malaysia	May 1994	Kuala Lumpur, Malaysia	MAPAQ	(514) 873-4410
Food Buyers Mission to Canada	Jun 1994	Canberra, Australia	DFAIT	(613) 995-7652
National Field Days Info Booth	Jun 1994	New Zealand*	DFAIT	(613) 995-7662
Outgoing Confectionery/Baker Mission	Jun 1994	Australia* New Zealand*	OMAF	(416) 326-3510
Incoming Buyers Malaysia/Thailand/Indonesia	Jul 1994	Toronto, Ontario	OMAF	(416) 326-3510
Incoming Mission Semi-Processed Food Malaysia	Jul 1994	Toronto, Ontario	OMAF	(416) 326-3510

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
Fine Food Catalogue Show	Sep 1994	Canberra, Australia	DFAIT	(613) 995-7652
Outgoing Agrifood Technology Mission	Sep 1994	India* Pakistan*	OMAF	(416) 326-3510
Royal Melbourne Show (Livestock)	Sep 1994	Melbourne, Australia	DFAIT	(613) 995-7652
Retail Promotion	Oct 1994	Philippines*	DFAIT	(613) 995-7659
Food Tech '94	Nov 1994	New Zealand*	DFAIT	(613) 995-7662
In-Store Food Promotion	Nov 1994	Indonesia*	DFAIT	(613) 992-0959

Central/Eastern Europe and the Commonwealth of Independent States

Model Dairy Farm Project in Poland	TBD*	Siedlce, Poland	AG CAN	(613) 993-6671
Outgoing Buyers Mission	Apr 1994	Budapest, Hungary	DFAIT	(613) 992-1449
Trade Mission — Kyrgyzstan/Ukraine	Apr 1994	CIS*	SAF	(306) 878-2222
Kazakhstan Livestock Buyers Mission	May 1994	CIS*	SAF	(306) 787-2222
Outgoing Mission	Aug 1994	Eastern Europe*	OMAF	(416) 326-3510
Veterinary Mission to Canada	Sep 1994	Bucharest, Romania	DFAIT	(613) 992-1449
Agricultural Mini Machines '94 Trade Show	Sep 1994	Moscow, Russia	DFAIT	(613) 996-6652
FoodApest '94	Nov 1994	Budapest, Hungary	DFAIT	(613) 992-1449
Agribition	Nov 1994	Canada*	DFAIT	(613) 996-6652
Outgoing Mission	Feb 1995	Eastern Europe*	OMAF	(416) 326-3510
Trade Mission CIS and China	Mar 1995	CIS*	SAF	(306) 787-2222
Trade Mission to Kazakhstan/Kyrgyzstan	Mar 1995	CIS*	SAF	(306) 787-2222

East Asia

Individual/Group Food Buyers Visits to Canada from Hong Kong	TBD*	Canada*	DFAIT	(613) 995-6962
AgroChina '94	Apr 1994	Beijing, China	DFAIT	(613) 996-6987
Chinese Livestock Buyers to Saskatchewan	Apr 1994	China*	SAF	(306) 787-2222
Biotechnology Seminar	May 1994	Taipei, Taiwan	DFAIT	(613) 996-7582
Beef Cattle Mission	May 1994	China*	SAF	(306) 787-2222
Incoming Food Processing Mission and Seminar from China	Jun 1994	Toronto, Ontario	OMAF	(416) 326-3510
International Food & Equipment Show	Jun 1994	Taipei, Taiwan	DFAIT	(613) 996-7582
Western Canada Farm Progress Show	Jun 1994	Saskatoon, Saskatchewan Manitoba*	DFAIT	(613) 996-6987

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
Hotel Food Promotion	Jul 1994	Taipei, Taiwan Taichung, Taiwan	DFAIT	(613) 996-7582
Peat Moss Incoming Buyers Mission	Jul 1994	Canada*	DFAIT	(613) 992-6129
International Best Food Products Fair	Aug 1994	Taipei, Taiwan	DFAIT	(613) 996-7582
Pet Goods Show	Aug 1994	Taipei, Taiwan	DFAIT	(613) 996-7582
Flour Millers Incoming Buyers Mission	Sep 1994	Canada*	DFAIT	(613) 992-6129
Food Promotion (Stores/Supermarkets/Restaurants)	Sep 1994	Hong Kong South China*	DFAIT	(613) 995-6962
Mission to Hong Kong, Singapore, Beijing	Sep 1994	Hong Kong Singapore Beijing, China	MAPAQ	(514) 873-4410
Trade Mission to China/ASEAN	Sep 1994	China*	SAF	(306) 787-2222
Confectionery Foods Outgoing Mission	Oct 1994	Taipei, Taiwan Tainan, Taiwan Taichung, Taiwan	DFAIT	(613) 996-7582
Food Promo with Dah Chong Hong (Gt China Consortium)	Oct 1994	Shenzhen, China Guangzhou, China	DFAIT	(613) 995-6962
Forage Mission	Oct 1994	China*	SAF	(306) 787-2222
Beef Cattle Mission from the People's Republic of China (PRC)	Nov 1994	Alberta* Saskatchewan*	DFAIT	(613) 996-6987
Incoming Ginseng Buyers Mission	Nov 1994	Ontario*	OMAF	(416) 326-3510
Outgoing Agrifood Technology Mission	Nov 1994	China* Vietnam*	OMAF	(416) 326-3510
International Vegetarian Food Fair	Jan 1995	Taipei, Taiwan	DFAIT	(613) 996-7582
Dehy Alfalfa Seminars	Mar 1995	TBD*	DFAIT	(613) 992-6129
Investment Canada Agric. Sector	Mar 1995	Taipei, Taiwan	DFAIT	(613) 996-7582
Japan				
Annual Canadian Culinary Competition	TBD*	Japan*	DFAIT	(613) 992-6185
Bovine Genetics Business Plan	TBD*	Japan* Southeast Asia*	DFAIT	(613) 992-6185
Canada Food Fairs	TBD*	Japan*	DFAIT	(613) 992-6185
Canadian Food Trade Press Visits to Japan	TBD*	Japan*	DFAIT	(613) 992-6185
Company Product Demos: Food and Consumer Products	TBD*	TBD*	DFAIT	(613) 992-6185
Dehy Alfalfa Business Plan	TBD*	Japan*	DFAIT	(613) 992-6185
Food and Consumer Product Gift Show	TBD*	Tokyo, Japan	DFAIT	(613) 992-6185
Japanese Chefs Training Program	TBD*	Canada*	DFAIT	(613) 992-6185
Key Sectors: Red Meats (Pork & Beef)	TBD*	Japan*	DFAIT	(613) 992-6185

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
Osaka Menu Development	TBD*	Japan*	DFAIT	(613) 992-6185
Osaka: Food Buyers' Mission	TBD*	Osaka, Japan	DFAIT	(613) 992-6185
Osaka: New Food Business Development	TBD*	Japan*	DFAIT	(613) 992-6185
Regional Shows: Food and Consumer Products	TBD*	TBD*	DFAIT	(613) 992-6185
Solo Food Show (Maple Syrup)	TBD*	Japan* Taiwan*	MAPAQ	(514) 873-4410
Incoming Chefs to Alberta	May 1994	Alberta*	DFAIT	(613) 995-1677
Foodex '95	Mar 1995	Tokyo, Japan (possibly Korea* and Taiwan*)	DFAIT OMAF	(613) 992-6185 (416) 326-3510
Fukuoka: Solo Food Show	Mar 1995	Japan*	DFAIT	(613) 992-6185
Osaka: Solo Food Show	Mar 1995	Japan*	DFAIT	(613) 992-6185

Latin America and the Caribbean

Mission commerciale au Chili	Apr 1994	Santiago, Chile	MAPAQ	(514) 873-4410
Evaluation du marche mexicain	May 1994	Mexico*	MAPAQ	(514) 873-4410
Incoming Mexican Grocery Buyers	May 1994	Toronto, Ontario	OMAF	(416) 326-3510
Abastur '94 Hotel & Restaurant Equipment Show	Jun 1994	Mexico City, Mexico	AG CAN DFAIT	(613) 993-6671 (613) 996-5358
Outgoing Processed Foods Mission (Baker/Grocery Focus)	Jun 1994	Mexico*	OMAF	(416) 326-3510
Market Reconnaissance & Trade Show	Jul 1994	South America*	OMAF	(416) 326-3510
Pesca internacional '94	Jul 1994	Veracruz, Mexico	DFAIT	(613) 996-5358
Salon internacional de l'alimentacion	Jul 1994	Caracas, Venezuela	DFAIT	(613) 996-5548
Expo Alimentos '94	Aug 1994	Monterrey, Mexico	DFAIT	(613) 996-5358
Expointer '94 International Animal and Agro-Industrial Show	Aug 1994	Rio Grande do Sul, Brazil	AG CAN	(613) 993-6671
Abras '94	Sep 1994	Rio de Janeiro, Brazil	DFAIT	(613) 996-5549
Degustation en magasin	Sep 1994	Mexico*	MAPAQ	(514) 873-4410
Ministerial Mission to Brazil	Sep 1994	Brazil*	SAF	(306) 787-2222
Guadalajara Livestock Show	Oct 1994	Guadalajara, Mexico	DFAIT	(613) 995-5358
National Swine Congress	Oct 1994	Puerto Vallarta, Mexico	DFAIT	(613) 996-5358
Tecni Fidta '94	Oct 1994	Buenos Aires, Argentina	DFAIT	(613) 996-5549

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
Livestock Buyers Mission	Nov 1994	Alberta* Ontario*	DFAIT	(613) 996-6129
Processed Foods & Primary Ag. Mission	Nov 1994	Mexico* South America*	OMAF	(416) 326-3510
Sago-Fisure '94	Nov 1994	Osorno, Chile	DFAIT	(613) 996-4199
Expo Pesca '94	Dec 1994	Santiago, Chile	DFAIT	(613) 996-4199
Exposicion Ganadera, Industrial, Commercial Y Artesonal Queretaro Dairy Booth '94	Dec 1994	Queretaro, Mexico	AG CAN	(613) 993-6671
Agro Industrial Expo '95	Jan 1995	Guadalajara, Mexico	DFAIT	(613) 996-5359
Canada Expo '95	Jan 1995	Monterrey, Mexico	DFAIT	(613) 996-5358
Outgoing Expo of the Americas Mission — Foodservice	Jan 1995	Mexico*	OMAF	(416) 326-3510
Market Identification Mission to Mexico	Jan 1995	Mexico City, Mexico	SAF	(306) 787-2222
ANTAD '95	Feb 1995	Mexico*	OMAF AG CAN NSAM	(613) 326-3510 (613) 993-6671 (902) 893-6380
Expocomer '95	Mar 1995	Panama*	DFAIT	(613) 996-5358
Food Service Mission	Mar 1995	Caribbean*	OMAF	(416) 326-3510
Aguascalientes Regional Dairy Show	Apr 1995	Aguascalientes, Mexico	AG CAN	(613) 993-6671
Multiple Markets				
Market Identification Mission — South Africa	Apr 1994	South Africa*	SAF	(306) 787-2222
Outgoing Processed Foods Mission to Food & Hotel Asia Show (Singapore)	Apr 1994	Singapore Malaysia* Hong Kong Taiwan*	OMAF	(416) 326-3510
C.I.F. Gift Basket/Mail Order Seminar	May 1994	Toronto, Ontario	OMAF	(416) 326-3510
Canadian Institute of Food Science and Technology (CIFST) Annual Conference	May 1994	Vancouver, B.C.	OMAF	(416) 326-3510
Exploratory Mission	May 1994	San Juan, Puerto Rico	MAPAQ	(514) 873-4410
Incoming F.M.A. Tour	May 1994	Toronto, Ontario	OMAF	(416) 326-3510
Private Label Seminar	Jul 1994	Toronto, Ontario	OMAF	(416) 326-3510
International Ginseng Conference (IGC '94)	Jul 1994	Vancouver, B.C.	AG CAN	(613) 993-6671
Private Label Incoming Buyers Mission	Aug 1994	Toronto, Ontario	OMAF	(416) 326-3510
Newfoundland Food and Livestock Show	Sep 1994	St. John's, Newfoundland	NSAM	(902) 893-6380

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
Pet Industry Joint Advisory Council (PIJAC) Show, Toronto (Pet Food)	Sep 1994	Toronto, Ontario	OMAF	(416) 326-3510
Incoming Confectionery Buyers Mission	Oct 1994	Toronto, Ontario	OMAF	(416) 326-3510
Incoming Soybeans Buyers Mission from Korea, Indonesia and Taiwan	Oct 1994	Toronto, Ontario	OMAF	(416) 326-3510
Trade Centre Royal Winter Fair	Oct 1994	Toronto, Ontario	OMAF	(416) 326-3510
World Dairy Expo/North American Fur Auction	Oct 1994	Madison, Wisconsin Cambridge, Massachusetts	NSAM	(902) 893-6380
Incoming Buyers Latin America and Europe	Nov 1994	Toronto, Ontario	OMAF	(416) 326-3510
Royal Winter Fair	Nov 1994	Toronto, Ontario	NSAM	(902) 893-6380
Private Label Processed Foods Mission (PLMA)	Jan 1995	Hong Kong Japan*	OMAF	(416) 326-3510
Canadian Produce Marketing Association	Jan 1995	Toronto, Ontario	NSAM	(902) 893-6380
Incoming Grocery Buyers Mission from Asia/Europe	Feb 1995	Toronto, Ontario	OMAF	(416) 326-3510
Incoming Tobacco Mission	Feb 1995	Toronto, Ontario	OMAF	(416) 326-3510
United States				
Arizona Retail Grocers Show	Apr 1994	Phoenix, Arizona Los Angeles, California	DFAIT	(613) 944-9474
New England Dairy and Deli Show	Apr 1994	Boston, Massachusetts	MAPAQ	(514) 873-4410
Northeast Foodservice Show	Apr 1994	Boston, Massachusetts	MAPAQ DFAIT	(514) 873-4410 (613) 944-9474
Outgoing Foodservice Mission	Apr 1994	New England*	OMAF	(416) 326-3510
P.R.O.F.I.T. Seminar	Apr 1994	Windsor, Ontario Detroit, Michigan	OMAF	(416) 326-3510
Hostex	Apr 1994	Toronto, Ontario	NSAM	(902) 893-6380
'94 Winter Fancy Food Show	May 1994	San Francisco, California	MAPAQ	(514) 873-4410
Food Marketing Institute (FMI)/National Restaurant Association	May 1994	Chicago, Illinois	NSAM OMAF DFAIT	(902) 893-6380 (416) 326-3510 (613) 944-9474
SCRIVNER Distributor's Food Show	May 1994	Buffalo, New York	DFAIT	(613) 944-9474
'94 International Dairy-Deli-Bakery Show	Jun 1994	Baltimore, Maryland	MAPAQ	(514) 873-4410
Gourmet Food & Beverage Expo	Jun 1994	Colorado*	OMAF	(416) 326-3510

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
Incoming Supermarket Buyers	Jun 1994	Winnipeg, Manitoba	DFAIT	(613) 944-9474
International Dairy Deli Association Conference	Jun 1994	Baltimore, Maryland	OMAF	(416) 326-3510
International Fancy Food Exhibition	Jun 1994	New York City, New York	OMAF	(416) 326-3510
International Food Technologies Exhibition	Jun 1994	Chicago, Illinois	OMAF	(416) 326-3510
Super Floral Show	Jun 1994	Phoenix, Arizona	OMAF	(416) 326-3510
Western Canada Farm Progress Show	Jun 1994	Western Canada* Minneapolis, Minnesota	DFAIT	(613) 944-5149
Strategic Alliance Program	Jun 1994	Minnesota*	SAF	(306) 787-2222
'94 International Fancy Food Summer Show	Jul 1994	New York*	MAPAQ	(514) 873-4410
Mid-Atlantic/AAN Show	Jul 1994	Baltimore, Maryland	OMAF	(416) 326-3510
Summer International Fancy Food Show	Jul 1994	New York*	DFAIT	(613) 944-9474
Empire Farm Days	Aug 1994	Buffalo, New York	DFAIT	(613) 944-5149
Michigan Restaurant Show	Aug 1994	Novi, Michigan	OMAF	(416) 326-3510
National Food Distributors Association	Aug 1994	Denver, Colorado	OMAF	(416) 326-3510
Western Restaurant Show	Aug 1994	San Francisco, California	OMAF	(416) 326-3510
'94 Natural Products Expo East	Sep 1994	Baltimore, Maryland	MAPAQ	(514) 873-4410
California Grocers Association Show	Sep 1994	Anaheim, California	DFAIT	(613) 944-9474
California Grocers Show	Sep 1994	Anaheim, California	OMAF	(416) 326-3510
Eastern States Exposition	Sep 1994	West Springfield, Maine	NSAM	(902) 893-6380
Florida Restaurant Association	Sep 1994	Orlando, Florida	DFAIT	(613) 944-9474
Incoming U.S. Baker Buyers to Bakery Showcase 1994	Sep 1994	Toronto, Ontario	OMAF	(416) 326-3510
Michigan Restaurant Show Reconnaissance	Sep 1994	Michigan*	OMAF	(416) 326-3510
National Prepared Frozen Food Festival	Sep 1994	East Rutherford, New Jersey	DFAIT	(613) 944-9474
Natural Products Expo East	Sep 1994	Baltimore, Maryland	DFAIT OMAF	(613) 944-9474 (416) 326-3510
SCRIVNER Distributor's Food Show	Sep 1994	U.S.*	DFAIT	(613) 944-9474
Wisconsin Grocers Show	Sep 1994	Wisconsin*	OMAF	(416) 326-3510

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
'94 Eastern Dairy-Deli-Bakery Show	Oct 1994	Edison, New Jersey	MAPAQ	(514) 873-4410
Atlantic Bakery Expo	Oct 1994	Atlantic City, New Jersey	OMAF	(416) 326-3510
Eastern Dairy-Deli-Baker Show	Oct 1994	New Jersey*	OMAF	(416) 326-3510
Illinois Grocer	Oct 1994	Pretoria, Illinois	OMAF	(416) 326-3510
'94 Private Label Trade Show	Nov 1994	Chicago, Illinois	MAPAQ	(514) 873-4410
Incoming "Border States" Buyers Mission	Nov 1994	Toronto, Ontario	OMAF	(416) 326-3510
Private Label Manufacturers' Association	Nov 1994	Chicago, Illinois	OMAF DFAIT	(416) 326-3510 (613) 944-9474
Broker Identification Program	Dec 1994	San Francisco California	OMAF	(416) 326-3510
Solo Food and Beverage Show	Dec 1994	Miami, Florida	DFAIT	(613) 944-9474
Incoming Western Region Buyers/Distributors	Jan 1995	Toronto, Ontario	OMAF	(416) 326-3510
National Farmers Direct Marketing	Jan 1995	Chicago, Illinois	NSAM	(902) 893-6380
National Food Distributors Association	Jan 1995	Fort Lauderdale, Florida	OMAF	(613) 326-7510
Natural Products West	Jan 1995	Anaheim, California	OMAF	(416) 326-3510
P.R.O.F.I.T. Seminar	Jan 1995	Buffalo, New York	OMAF	(416) 326-3510
Processed Meats Seminar	Jan 1995	Toronto, Ontario	OMAF	(416) 326-3510
Best of Boston Show	Feb 1995	Boston, Massachusetts	OMAF DFAIT DFAIT	(416) 326-3510 (613) 944-9482 (613) 944-9474
California Farm Equipment Show and Expo	Feb 1995	Los Angeles, California	DFAIT	(613) 944-5149
Canadian International Farm Equipment	Feb 1995	Minneapolis, Minnesota	DFAIT	(613) 944-5149
Sysco Foods Inc.	Feb 1995	Buffalo, New York	DFAIT	(613) 944-9474
Wisconsin Restaurant Show	Feb 1995	Wisconsin*	OMAF	(416) 326-3510
Boston Seafood Show	Mar 1995	Boston, Massachusetts	DFAIT	(613) 944-9482
International Fancy Food & Confection	Mar 1995	San Diego, California	OMAF	(416) 326-3510
Michigan Grocers Show	Mar 1995	Lansing, Michigan	OMAF	(416) 326-3510
Natural Foods Expo West	Mar 1995	Anaheim, California	DFAIT	(613) 944-9474
Winter International Fancy Food Show	Mar 1995	San Francisco, California	DFAIT	(613) 944-9474

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
Winter Fancy Food Show	May 1995	U.S.*	DFAIT	(613) 944-9474
New Exporters to Border States (NEBS) Mission	Jun 1995	Minneapolis, Minnesota	DFAIT	(613) 944-5149
Summer Fancy Food Show	Jul 1995	U.S.*	DFAIT	(613) 944-9474
Western Europe and European Community				
Canada Food Fair (25 Promo Events)	TBD*	London, England	DFAIT	(613) 995-6565
Canadian Food Promotion (Restaurants)	TBD*	Stockholm, Sweden	DFAIT	(613) 995-4730
Outgoing Specialty Foods	TBD*	Stockholm, Sweden	DFAIT	(613) 995-4730
Veterinary Assistance in European Community Countries	TBD*	EC*	AG CAN	(613) 993-6671
International Health Food Trade Fair and Reconnaissance	Apr 1994	London, England Switzerland* Belgium* Netherlands*	OMAF	(416) 326-3510
Mission to the United Kingdom	Apr 1994	U.K.*	MAPAQ	(514) 873-4410
Gastronord '94	Apr 1994	Stockholm, Sweden	DFAIT	(613) 996-2147
Private Label Europe Show & Mission	May 1994	Frankfurt, Germany U.K.*	OMAF	(416) 326-3510
CIBUS (Agri Food)	May 1994	Parma, Italy	DFAIT	(613) 996-2147
Incoming Agriculture Buyers Mission (Dairy Cattle) from Spain	Jun 1994	Ontario* Quebec*	DFAIT	(613) 996-7544
Incoming Buyers Mission to Western Canada Farm Progress Show	Jun 1994	Regina, Saskatchewan	DFAIT	(613) 943-0611
Update on Western Europe	Jun 1994	Canada*	OMAF	(416) 326-3510
Outgoing Mission to Denmark	Jun 1994	Herning, Denmark	DFAIT	(613) 995-4730
Further Turkey Processing Technology	Aug 1994	Western Europe*	AG CAN	(613) 995-9224
Grain Millers Mission from Italy	Sep 1994	Canada*	DFAIT	(613) 995-9766
Incoming Specialty Meat Mission from Germany	Sep 1994	Canada*	DFAIT	(613) 996-3774
Incoming Tobacco — Europe	Sep 1994	Toronto, Ontario	OMAF	(416) 326-3510
Product Acceptance Testing	Sep 1994	Belgium*	OMAF	(416) 326-3510
Canadian Food Festival (Fine Foods)	Oct 1994	Brussels, Belgium	DFAIT	(613) 995-6440
Flour Technology Mission	Oct 1994	U.K.*	AG CAN	(613) 995-9554
Incoming Food Buyers Mission	Oct 1994	Canada*	DFAIT	(613) 995-6565
U.K. Bean Conference	Oct 1994	U.K.*	OMAF	(416) 326-3510
NEXOS (New Exporters to Overseas Markets) Mission to SIAL (Salon international de l'alimentation)	Oct 1994	Paris, France	DFAIT	(613) 996-2363
SIAL	Oct 1994	Paris, France	MAPAQ DFAIT	(514) 873-4410 (613) 996-2147

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
SIAL Show & Mission	Oct 1994	Paris, France TBD*	OMAF	(416) 326-3510
Food and Beverage Fair, Turkey	Jan 1995	Istanbul, Turkey	DFAIT	(613) 996-2147
Ontario Genetics Promotion	Jan 1995	U.K.*	OMAF	(416) 326-3510
Athens Food and Beverage Show	Feb 1995	Athens, Greece	DFAIT	(613) 996-5263
KISTA Mall Canada Promotion (Food)	Feb 1995	Stockholm, Sweden	DFAIT	(613) 995-4730
NEXOS (New Exporters to Overseas Markets) Mission to SIMA	Feb 1995	Paris, France	DFAIT	(613) 995-2363
IMDEX '95 (International Maritime Defence)	Mar 1995	London, England	DFAIT	(613) 995-6565
NEXOS Mission to SIA (Salon international de l'agriculture)	Mar 1995	Paris, France	DFAIT	(613) 995-6565
Processed Egg Technology	Mar 1995	Western Europe*	AG CAN	(613) 995-9554
SIA or SIMA	Mar 1995	Paris, France	DFAIT	(613) 996-2363
International Food & Drink Exhibition & Mission	Apr 1995	London, England TBD*	OMAF	(416) 326-3510

* Exact dates and/or cities to be determined.

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Canada's International Trade Business Plan is made up of three key components: a Strategic Overview, a series of industry sector strategies, and an accompanying series of international activities lists. Industry sectors available include:

1. Advanced Manufacturing Technologies
2. Aeronautics
3. Agri-Food Products
4. Arts and Cultural Industries
5. Automotive
6. Biotechnologies
7. Business and Professional Services
8. Chemicals and Plastics
 - Chemicals and Petrochemicals
 - Plastics and Polymer Products
9. Consumer Products
 - Apparel Industry
 - Business and Institutional Furniture
 - Footwear
 - Hardware and Housewares
 - Household Furniture
 - Sporting Goods (including recreational watercraft)
 - Textiles
10. Defence and Related Products
 - Aviation, Marine and Defence Electronics
 - Marine and Land Defence Systems
11. Electrical and Energy Equipment
 - Electrical Equipment
 - Oil and Gas Field Equipment
12. Environmental Industries
13. Fish and Seafood Products
14. Forest Industries
15. Industrial Technologies
 - Agricultural Technology, Machinery and Equipment
 - Mining — Forestry — Pulp and Paper
 - Ocean and Marine Shipboard Technology
16. Information Technologies
17. Medical and Health-care Products
18. Minerals, Metals, Advanced Materials and Construction Products
19. Space
20. Tourism
21. Urban Transit and Rail

For information on how to receive the Strategic Overview, or additional industry sector strategies and international activities lists, please call: **1-800-267-8376**



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Canada's International Trade Business Plan

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Aussi disponible en français sous le titre Arts et culture.



Arts and Cultural Industries

The performing arts involve creative pursuits in music, dance, theatre, literature and other cultural enterprises. Cultural industries, film/video, broadcasting, heritage, visual arts, sound recording and publishing are products to be promoted in the international marketplace.

International Environment

Arts and cultural industries are important to national economies earning approximately \$200 billion worldwide and \$6 billion in Canada in 1991-92. These earnings are expected to grow at the rate of 10 to 15 percent annually. In this dynamic sector, opportunities are enhanced where there is a willingness to embrace and adapt the wide range of available new technologies.

The globalization of the sector has increased the level of competition and the rewards for success. The demand side of the industry reflects a degree of cultural preference, mostly for U.S.-style products. The Japanese, French, Italian, German and Australian interests have positioned themselves in the global market to take advantage of this trend. The supply side of the market is undergoing a rationalization, characterized by the rise to prominence of a number of large, vertically integrated global corporations. Consortia, joint ventures and co-productions are emerging as the alternative sources of production and distribution to these globally integrated corporations.

Canadian Position

One of the biggest challenges facing the arts and cultural industries in Canada is the competitive distribution structure and the small size of the domestic market. The global market is becoming more important to Canadian firms with improvements in production technology and the increase in production costs. Canadian firms are meeting with success in such global niche markets as docudramas, children's programming, literature, films and dramatic series.

To balance the effects of the market size and distribution, Canada has been reluctant to permit increased foreign investment in this sector. These industries were left out of the GATT and NAFTA negotiations to prevent the standardization of content and complete foreign control of distribution.

Canadian cultural industries are producing high-standard products and services with global appeal. A new generation of dynamic business-oriented entrepreneurs is emerging in this sector.

The Arts

The development and growth of performing arts organizations in theatre, opera, music and dance during the past 30 years are an important indicator of cultural achievement in Canada. The arts sector employs highly trained workers with professional levels of education. This work force also serves as a talent pool for broadcasting, film, publishing and sound-recording sectors.

There has been a steady growth in performing arts organizations, size of the arts labour force and box office revenues during the past few decades. However, the recession as well as the increasing costs of production and marketing have led to deficits of nearly \$27 million in 1991.

The arts sector in Canada has undertaken major operational restructuring and seeks long-term growth through more effective marketing. Despite financial difficulties, Canada has a vibrant domestic arts industry, which is complemented by successful visits abroad of large and small arts organizations, and attracts foreign tourist dollars. The sector's strengths are the high quality of the talent and expertise and an extensive infrastructure of presenting facilities across the country. Dissemination of arts programming by electronic

media conventional television, as well as by new technologies such as video-disc or high-definition television (HDTV), are potential strengths to be further realized.

A comprehensive arts audience profile compiled from a 1992 survey has the marketing potential to help arts companies develop long-term and reliable domestic planning strategies. Weaknesses of the arts sector in Canada include below-average incomes for professional artists, especially those who are self-employed; recurring operating deficits; the growing competition for leisure time and the increasing costs of production.

Cultural Industries

The revenues from the export of cultural products are significant and were estimated at more than \$350 million in 1989. Canada has recognized the importance of this sector and the key to its success will continue to be based on the development of a strong domestic market.

Canadian artists' exposure to foreign audiences is recognized as an important element of Canada's international relations and is vital to the overall success of domestic cultural objectives. Canada has to date signed film and television joint-production agreements with 23 countries to help gain access to international markets for Canadian film products.

Broadcasting

Broadcasting is the major vehicle for exchange of cultural expression among Canadians and is a key component of our cultural industries. Federal legislation, policies and regulations are intended to encourage domestic program production and to ensure the continued presence of Canadian programming in the broadcasting system. They include:

- Canadian content regulations requiring broadcasters to reserve 50 percent of their entire schedules and 60 percent of their prime-time schedules for Canadian-made programs

- simultaneous substitution regulations requiring Canadian cable companies to substitute local signals for American channels when they are presenting the same programs at the same time; the aim is to maximize local broadcasters' advertising revenues by increasing the number of viewers tuned to the Canadian channel
- Bill C-58 which restricts tax breaks for advertising expenditures to those advertisers who purchase advertising time on Canadian television channels; this helps ensure that advertising dollars remain in Canada.

Canadian production is increasing as our broadcasters realize that good Canadian programs, besides being popular at home, also generate international sales. Still, it remains cheaper by far for Canadian broadcasters to acquire broadcast rights for expensive U.S. programs than to create original Canadian programs.

Film and Television Production and Distribution

The feature film industry in Canada is largely controlled by U.S.-owned companies which frequently come to Canada to shoot films but rarely establish permanent offices here. The Canadian production sector is composed of 724 small companies with total revenues of about \$700 million.

The distribution sector is strongly dominated by a few foreign firms. Canadian audiences see very few Canadian films exclusively distributed by small Canadian companies. Foreign films occupy 95 to 96 percent of screen time in Canadian cinemas and foreign companies earn approximately 86 percent of Canadian film distribution revenues. While Canada has often focused on its cultural importance, this sector is primarily viewed as a commercial industry by the U.S. Currently, discussions are going on with the Canadian film industry for legislative change regarding the distribution issue, and the recognition of Canada as a separate market from that of the U.S.

Canadian-owned companies are beginning to gain increased control of the feature film distribution industry and to do quite well in the broadcast and non-theatrical distribution markets.

Sound Recording

The sound-recording production industry in Canada consists of six dominant multinational corporations which control nearly 89 percent of the market. Approximately 200 small Canadian companies account for the remaining 11 percent. The music industry accounts for about \$250 million annually in exports.

In addition to a small domestic market controlled by the multinationals, the challenges faced by the industry are the significant copyright issues, i.e., neighbouring rights and home copying, financial weakness, inadequate resources to devote to marketing and limited access to distribution systems, particularly in English Canada.

The CRTC's Canadian-content and French-language content requirements for music played on Canadian radio have been very effective in greatly improving access to the domestic market for Canadian sound recordings. To increase its exposure and revenues, the Canadian sound-recording industry must concentrate on the marketing of Canadian products in the global marketplace.

Publishing

Publishing, like other cultural industries, must compete with large multinationals for a relatively small Canadian market. In 1990, foreign-owned companies in Canada earned \$1.2 billion or 50 percent of domestic revenues and \$1.4 billion or 40 percent of total revenues which include exports.

Canada recognizes that the importance of publishing goes beyond its direct economic benefits and has enacted legislation aimed at ensuring this sector's viability. In 1985, the government established a policy for foreign investment in the book trade requiring the creation of joint ventures with majority Canadian control on new invest-

ments, and for divestiture of control to Canadians in cases of direct or indirect acquisitions. This policy was revised in 1992 and a new industrial development program was introduced for publishing firms that are 75-percent-Canadian-owned. This program put Canadian publishers in a stronger position to gain control of the home market. Periodical publishing is mostly targeted at the domestic market.

Strategic Direction

- The Canadian government is committed to the support of cultural industries with respect to marketing, distribution and exhibition.
- Support will be given for the export of cultural products in foreign markets.
- Market access and promotion will be key elements for improving the potential of Canadian cultural products abroad.
- A directory of arts and cultural industries export assistance programs and export profiles of arts and cultural industries will be compiled and an annual arts and cultural seminar will be held.
- There will be increased interdepartmental cooperation in targeting markets of mutual interest.
- Tailored marketing efforts will be concentrated on the U.S., the EC, the Pacific Rim, Russia, eastern Europe, Mexico and Latin America.
- The individual sectors comprising the cultural industries will require further targeting based on past experience and present trends.

Current priorities include:

- delivery of information on foreign markets to the arts and culture sector
- collaboration with trade and commercial specialists in Canada and abroad

- establishment of policies for marketing, distribution and exhibition based on appropriate support for the production of Canadian films, sound recordings and books to be exported to foreign markets.

Contact

International Relations Division
Department of Canadian Heritage
Tel.: (613) 990-4259
Fax: (613) 952-5313

Arts and Cultural Industries

Activity	Date	Location	Dept.	Contact
United States				
Buyers Mission to Canada	May 1994	Canada*	DFAIT	(613) 944-6577
College Music Promotion (CNGNY)	May 1994	New York*	DFAIT	(613) 944-6577
Incoming Mission of TV and Film Producers to the Prairie Provinces	May 1994	Alberta* Saskatchewan* Manitoba*	DFAIT	(613) 944-6577
Regional Book Shows in conjunction with the Association for the Export of Canadian Books (AECB)	May 1994	U.S.*	DFAIT	(613) 944-6577
American Book Association (ABA) in conjunction with the AECB	May 1994	Los Angeles, California	DFAIT	(613) 944-6577
Mid-America Arts Alliance Scouting Mission to the Canada Dance Festival	Jun 1994	Ottawa, Ontario	DFAIT	(613) 944-6577
Buyers Mission to Canadian Performing Arts Show in Toronto	Oct 1994	Toronto, Ontario	DFAIT	(613) 944-6577
New Exporters to Border States (NEBS) Mission: Performing Arts Industry to Boston	Jan 1995	Boston, Massachusetts	DFAIT	(613) 944-6577
Showbiz Expo East	Jan 1995	Atlanta, Georgia	DFAIT	(613) 944-6577
Location Expo '95	Feb 1995	New York*	DFAIT	(613) 944-6577
Western Europe and European Community				
Frankfurt Book Fair	Oct 1994	Frankfurt, Germany	DFAIT	(613) 996-3774

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 - Chemicals and Petrochemicals
 - Plastics and Polymer Products
9. Consumer Products
 - Apparel Industry
 - Business and Institutional Furniture
 - Footwear
 - Hardware and Housewares
 - Household Furniture
 - Sporting Goods (including recreational watercraft)
 - Textiles
10. Defence and Related Products
 - Aviation, Marine and Defence Electronics
 - Marine and Land Defence Systems
11. Electrical and Energy Equipment
 - Electrical Equipment
 - Oil and Gas Field Equipment
12. Environmental Industries
13. Fish and Seafood Products
14. Forest Industries
15. Industrial Technologies
 - Agricultural Technology, Machinery and Equipment
 - Mining — Forestry — Pulp and Paper
 - Ocean and Marine Shipboard Technology
16. Information Technologies
17. Medical and Health-care Products
18. Minerals, Metals, Advanced Materials and Construction Products
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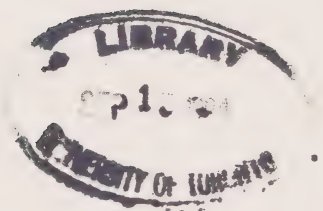
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Automotive

The automotive sector consists of car, truck and trailer assembly, tires and components manufacturing, dealerships, garages, aftermarket/accessories, and supply and service equipment manufacturers.

International Environment

The automotive industry is becoming increasingly globalized. The global market for automotive vehicles is 48 million of which Japan and South-east Asia produce approximately 17 million, western Europe 15 million, and North America 12 million vehicles a year.

Since the early 1990s, automotive sales have continued to decline as the worldwide economic slow-down persists. Global competition is therefore intensifying for both automotive parts companies and assemblers. The shift over the past 10 years in global-market share from North America to Japan and Southeast Asia has created international trade tensions which the affected companies are dealing with in various ways. At the same time, changes in the global market, particularly emerging markets such as China, eastern Europe and Latin America, are creating opportunities for Canadian firms.

International trade agreements are affecting countries' comparative advantages as tariffs are driven down with each successive GATT round and regional free trade agreements are negotiated. Trade barriers will likely continue to be reduced, thus opening new markets to Canadian firms and creating new pressures on multinational firms to consolidate operations.

The automotive industry is adjusting to many challenges such as globalization, shifts in production centres, changing tariff regimes, technological change, environmental and other regulations, and consolidation of supplier firms. As a result, the industry is being pressured to restructure and to form strategic alliances in order to reduce costs and increase competitiveness. To meet these challenges, the North American industry has been converting from mass production

to lean production. This is resulting in a "tier structure" in the parts industry, with tier-one suppliers providing full service, including R&D and design-in engineering capabilities. Tier-two suppliers are marketing their capabilities to tier-one companies, some of which used to be their competitors. These developments are leading to a much more customer-focused industry, with quality, cost, delivery and customer service as the primary criteria for success.

The U.S. remains by far the most important market for Canadian automotive firms. Over 80 percent of the vehicles and parts produced in Canada are ultimately destined to the U.S. Having operated under the Auto Pact in an essentially free trade environment, Canadian companies tend to view the U.S. as part of their "domestic" market.

In Japan, strong economic growth has recently given way to retrenchment as the domestic market and corporate profit levels declined. Moreover, Japan has not been immune to restructuring. Japanese-owned assemblers have been a powerful stimulus to the international restructuring process and have now captured close to 30 percent of the passenger car market in North America. At the same time, these firms have established an important vehicle production base in North America, representing about 16 percent of total capacity, and a significant parts manufacturing base.

In Europe, Japan has agreed to limit exports of vehicles in order to allow local firms to restructure. This restructuring is under way and it is expected that there will be no restrictions on access to the EC market by 1999.

Mexico is the newest focus of attention, particularly in light of the improved access to the market as a result of NAFTA. The ultimate integration of the North American market, after

the phasing out of certain Mexican restrictions, will provide significant trade, sourcing and investment opportunities for both assemblers and parts companies.

Canadian Position

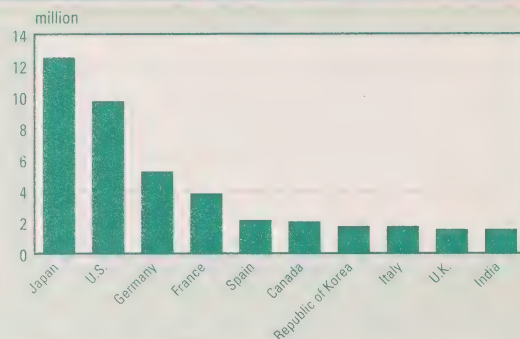
The automotive sector is Canada's largest manufacturing sector (7 percent of GDP — Goods Producing Industries), employing 136 000 people in manufacturing and 306 000 in retailing. The value of original equipment (OE) vehicles, parts and aftermarket shipments exceeds \$47 billion. With 15 assembly plants, Canada is the sixth-largest automotive producer in the world.

In 1992, Canada produced 1 957 730 vehicles which represented 15.4 percent of North American production (see Figure 1). Over 70 percent of this was exported to the U.S. Employment was 64 300. Light vehicle sales in 1992 were 1 211 627 units of which Japanese market share overall was about 25 percent (see Figure 2).

In 1992, the Canadian automotive parts industry had sales of \$13.6 billion which represented 12 percent of total North American automotive parts manufacturing. Over 90 percent of these sales were to the Big Three (Chrysler, Ford and General Motors) assemblers, with the remainder shared by Asian and European assemblers. Employment was 71 800 people.

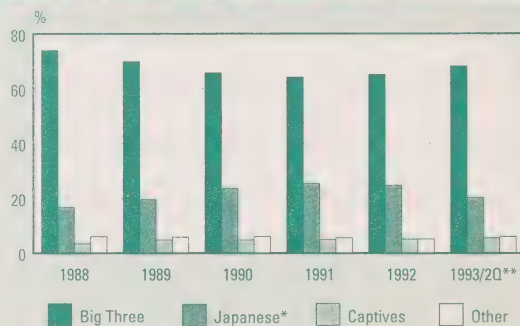
The Canadian automotive sector is fully integrated on a North American basis. Most bilateral trade is within the Auto Pact. The FTA, which came into effect on January 1, 1989, and NAFTA, which came into effect January 1, 1994, have established new, clearer rules of origin and guaranteed access to the U.S., and eventually Mexico, for all Canadian producers. A sluggish North American economy and the restructuring of the Big Three continue to affect automotive sales. The parts sector is also restructuring. While there are fewer parts producers today compared to 1990, those which remain continue to make significant competitive gains.

Figure 1 — World's Top 10 Light Vehicle Producers in 1992



Source: Automotive News 1993.

Figure 2 — Canadian Light Vehicle Market Shares



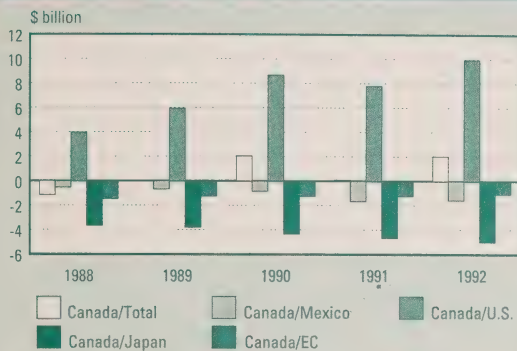
* Japanese share excludes captives.

** 2Q = two quarters.

Source: Ward's, Motor Vehicle Manufacturers Association of the United States, Association of International Automobile Manufacturers of Canada.

The Canadian assembly base is 100-percent-foreign-owned, except for truck bodies and trailer manufacturers. The Big Three have approximately 85 percent of the assembly production, and new entrants have the balance. Total employment in assembly, including truck bodies and trailers was 64 300 in 1992. New entrants employed approximately 8.5 percent of this total. A growing portion of the parts sector (30 percent) is Canadian-owned. Given that several of Canada's trading partners are encouraging firms into increased local sourcing and investment, Canada must promote

Figure 3 — Canada's Automotive Trade Balance with Major Trading Partners



Excludes automotive materials.

Source: Statistics Canada.

itself as a source of competitive supply and an attractive location for investment. While the exchange rate of the dollar is important, improved productivity and dedication to continuous improvement are also key to the future growth of the industry.

During the first wave of Japanese assembler investments to North America, Canada attracted three plants involving close to \$1.5 billion in investment. With the second wave of Japanese parts investments, Canada received limited investment. The Big Three continue to invest heavily. The assembly sector in Canada is competitive. The Big Three plants in Canada have strong product mandates, while Asian investors have new and modern plants. Canadian assembly plants are known for their high quality. In the 1993 quality ratings, three of the top four plants in North America were located in Canada.

The automotive parts sector is also competitive. Parts manufacturing output in 1992 was \$189 000 per employee, up 23 percent from 1989. The Canadian automotive parts sector has some companies with leading-edge process/production technology and a few with proprietary products.

North American and European countries' interest in Canada as an investment location has recently increased. Canada has a good record of consistent improvement in quality, high education standards, improved competitiveness and a commitment to training. Currency shifts have also contributed substantially to this improvement in competitiveness. The high value of the yen relative to the U.S. and Canadian dollars, and the relative strength of the U.S. dollar compared to the Canadian dollar, together with companies' steps to improve their productivity, are significantly increasing the competitiveness of Canadian firms. This should offer new opportunities for increased Canadian sourcing and exports to Japan.

R&D tax credits in Canada are the most generous of OECD countries, with the U.S. ranking No. 5 and Germany No. 8. However, this fact is not widely known. Canada's R&D tax policy could encourage additional investments in key technologies and strategic alliances.

European companies are not only restructuring at home, but are also looking outward, establishing facilities in other parts of the world including North America. This could result in increased sourcing and investment opportunities for Canada.

To take full advantage of this growing market, Canadian manufacturers will have to move quickly as international competitors also seek to participate in this expanding market.

Canada had an overall vehicles and automotive parts trade surplus in 1992 of \$2 billion (up from \$90 million in 1991). This included a \$9.9 billion surplus with the U.S. and a \$5 billion deficit with Japan (see Figure 3).

The Challenge

- The Canadian vehicle and automotive parts sectors are competitive. To develop markets further, this must be clearly conveyed to our customers around the world. We must strengthen the profile of Canadian capabilities, particularly in the priority markets of the U.S., Japan, Mexico and Europe.
- To some extent, the structure of the Canadian automotive industry makes it difficult to respond to new opportunities. Multinational enterprises often make production decisions without full knowledge of the Canadian industry's competitiveness. Moreover, independent Canadian parts companies in many cases have limited financial and technical resources to challenge world markets. Industry and governments will need to persevere and focus activities in order to overcome these difficulties.
- The challenge for governments is to create and maintain an industrial and trade policy environment which fosters the development of the motor vehicle and parts industry, attracts long-term manufacturing and technology investment, improves sourcing opportunities and increases trade.

Strategic Direction

Sourcing/Trade Development

- Increase sourcing and exports of vehicles, OE and aftermarket parts, and service equipment from Canada to the priority markets, through fairs, missions, visits, seminars and other activities. (DFAIT, Industry Canada, Posts, Automotive Parts Manufacturers Association of Canada [APMA], Automotive Industries Association of Canada, Pacific Automotive Co-operation Inc. [PAC])

- Balance international trade pressures, to ensure that the Canadian automotive sector receives full access to all sourcing/procurement, investment, trade and design-in activities through consultations. (DFAIT, Industry Canada, Posts)
- Raise the profile of the Canadian automotive parts sector in Mexico, Japan and Europe by encouraging strong industry lead in international activities. (DFAIT, Industry Canada, Posts, APMA)

Investment/Technology Acquisition

- Encourage Canadian-based assembly plants to modernize, obtain key product mandates and expand to world scale as markets dictate by promoting and maintaining a good business climate. (DFAIT, Industry Canada)
- Attract complementary high-value-added parts manufacturing investments through investment promotion activities and communications. (DFAIT, Industry Canada, Posts, APMA)
- Promote joint ventures and licensing between foreign and Canadian parts producers in subsectors where Canada lacks strength, through analysis and targeted promotion with industry. (Industry Canada, APMA)

Research and Development

- Encourage R&D in Canada through promotion of the R&D tax benefit and bilateral technology development programs. (DFAIT, Industry Canada, Posts, APMA)

Contact

Light Vehicles Directorate
Automotive, Urban Transit and Rail Branch
Industry Canada
Tel.: (613) 954-3445
Fax: (613) 950-8288

Automotive

Activity	Date	Location	Dept.	Contact
Africa and the Middle East				
Incoming Buyers from Saudi Arabia to Canadian International Auto Show	Apr 1994	Canada*	DFAIT	(613) 944-5984
Asia Pacific South				
TruckCan '94: Incoming Buyers from Australia	Oct 1994	Canada*	DFAIT	(613) 995-7662
Central/Eastern Europe and the Commonwealth of Independent States				
Car Components Mission	Apr 1994	Budapest, Hungary	DFAIT	(613) 992-1449
Japan				
Recreational Vehicle Solo Show	Oct 1994	Tokyo, Japan	DFAIT	(613) 995-1677
Latin America and the Caribbean				
PACE Auto Parts Show	Jul 1994	Mexico City, Mexico	Industry Canada	(613) 954-3436
Auto Parts Mission (PACE)	Jul 1994	Aguascalientes, Mexico Puebla, Mexico	Industry Canada	(613) 954-3436
Auto Parts Mission to Mexico	Jan 1995	Mexico City Mexico	Industry Canada	(613) 954-3706
Multiple Markets				
Pacific Automotive Co-operation Inc. (PAC)/Automotive Parts Manufacturers Association of Canada (APMA) Japanese Tier One Visits in the United States	Apr 1994	U.S.*	Industry Canada	(613) 954-3445
APMA Presidential Visit to Canada/Japan Business Conference in Kyoto	May 1994	Japan*	Industry Canada	(613) 954-3445
Japanese Auto Media Mission to Canada	Jun 1994	Canada*	Industry Canada	(613) 954-3445
PAC Steering Committee — Tenth Anniversary Mission from Japan	Jun 1994	Canada*	Industry Canada	(613) 954-3445
PAC/APMA Auto Parts Technology Seminar	Oct 1994	Canada*	Industry Canada	(613) 954-3445
Purchasers from Japan to Coincide with PAC/APMA Seminar in Toronto	Oct 1994	Canada*	Industry Canada	(613) 954-3445
Auto Parts Mission to Japan	Nov 1994	Japan*	DFAIT	(613) 995-1677

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
United States				
Incoming Tier One Buyers (from Detroit)	Apr 1994	Canada*	DFAIT	(613) 944-5149
Canadian International Auto Show	Apr 1994	Los Angeles, California New York City, New York Detroit, Michigan	DFAIT	(613) 944-5149
University of Michigan Management Seminar	Aug 1994	Michigan*	DFAIT	(613) 944-5149
SEMA/AI	Nov 1994	Las Vegas, Nevada	DFAIT	(613) 944-5149
APMA Regional Meeting	Feb 1995	Detroit, Michigan	DFAIT	(613) 944-5149
Society of Auto Engineers	Feb 1995	Detroit, Michigan	DFAIT	(613) 944-5149
Mid-America Trucking Show	Mar 1995	Cincinnati, Ohio	DFAIT	(613) 944-5149
Outgoing Auto Matchmaker	Mar 1995	Detroit, Michigan	DFAIT	(613) 944-5149
Western Europe and European Community				
NEXOS (New Exporters to Overseas Markets) Mission (Garage Equipment)	TBD*	Belgium*	DFAIT	(613) 995-6440
Incoming Automotive Mission from Denmark to AIA	Apr 1994	Toronto, Ontario	DFAIT	(613) 995-4730
Incoming Buyers from Finland to Canadian International Auto Show	May 1994	Toronto, Ontario	DFAIT	(613) 995-4730
Auto Parts Sales Mission	Sep 1994	Munich, Germany Vienna, Austria	DFAIT	(613) 995-9766
Automechanika '94	Sep 1994	Frankfurt, Germany	DFAIT	(613) 992-7001
NEXOS Auto Industry Mission	Sep 1994	Sweden*	DFAIT	(613) 992-7001
Mission to Automechanika	Sep 1994	Frankfurt, Germany	DFAIT	(613) 992-7001
Equip'Auto '95	Sep 1995	Paris, France	Industry Canada	(613) 996-2363

* Exact dates and/or cities to be determined.

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Canada's International Trade Business Plan is made up of three key components: a Strategic Overview, a series of industry sector strategies, and an accompanying series of international activities lists. Industry sectors available include:

1. Advanced Manufacturing Technologies
2. Aeronautics
3. Agri-Food Products
4. Arts and Cultural Industries
5. Automotive
6. Biotechnologies
7. Business and Professional Services
8. Chemicals and Plastics
 - Chemicals and Petrochemicals
 - Plastics and Polymer Products
9. Consumer Products
 - Apparel Industry
 - Business and Institutional Furniture
 - Footwear
 - Hardware and Housewares
 - Household Furniture
 - Sporting Goods (including recreational watercraft)
 - Textiles
10. Defence and Related Products
 - Aviation, Marine and Defence Electronics
 - Marine and Land Defence Systems
11. Electrical and Energy Equipment
 - Electrical Equipment
 - Oil and Gas Field Equipment
12. Environmental Industries
13. Fish and Seafood Products
14. Forest Industries
15. Industrial Technologies
 - Agricultural Technology, Machinery and Equipment
 - Mining — Forestry — Pulp and Paper
 - Ocean and Marine Shipboard Technology
16. Information Technologies
17. Medical and Health-care Products
18. Minerals, Metals, Advanced Materials and Construction Products
19. Space
20. Tourism
21. Urban Transit and Rail

For information on how to receive the Strategic Overview, or additional industry sector strategies and international activities lists, please call: **1-800-267-8376**



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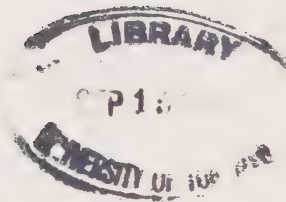
Canada's International Trade Business Plan

1994-1995

***An Integrated Plan for Trade, Investment
and Technology Development***



Doing Business Abroad



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Aussi disponible en français sous le titre Biotechnologie.



AVR 8022

Biotechnologies

Companies included in this sector are involved in both traditional and innovative application of biological systems for the production of goods and services. At one end of the spectrum this includes traditional crop-breeding techniques, while at the other it encompasses genetic engineering and scientific disciplines for the discovery and development of health-improving treatments. This includes recombinant DNA, monoclonal antibody, gene therapy, DNA amplification and antisense technologies. Products and services arising from the use of biotechnologies include pharmaceutical preparations, in-vitro and in-vivo diagnostics substances, industrial organic chemicals, pesticides, waste treatment systems, sanitary services, biological research and laboratory testing services.

International Environment

Globally, bio-industries employ about 200 000 people in 3 000 to 4 000 firms. Product sales are presently in the \$7-billion to \$10-billion range and are expected to reach the \$100-billion to \$150-billion range by the year 2000.

While bio-industries currently represent only a small segment of global economic activity, their tremendous growth and far-reaching implications for other sectors make them strategically important. Products and services in health care, agriculture, aquaculture, forestry, fine chemicals, mining and the environment all benefit from biotechnological discoveries. Governments worldwide now see biotechnology as a critical resource for economic growth, both in terms of an opportunity to compete in new industries, as well as offering technologies which can enhance traditional sectors, such as food, energy, health care and chemicals.

The richest market at present for biotechnological innovation is health care, but agriculture and environmental protection/remediation are major emerging markets. The latter has strong implications for the forestry, energy and chemical industries and the growth potential in these areas could reach that of health care.

The U.S. leads all nations in the development of bio-industries, primarily due to its large investment in biomedical research over the past several

decades. There are currently about 1 300 companies competing in the biotechnology industry in the U.S. The entrepreneurial environment in the U.S. biotechnology community and ready access to risk capital have yielded a number of significant biotechnology discoveries and have led to the introduction of several innovative products by smaller firms.

Although Japan currently trails the U.S. in the commercialization of biotechnology, it is rapidly expanding its bio-industries and is targeting world leadership by the year 2000. Japanese corporations have taken the lead in developing applications for biotechnology research (e.g. the brewing industry and the fermentation process). Over the past several years, acquisition of research and technology results from abroad has allowed Japanese companies to focus on biotechnological applications to increasingly challenge the leadership position of the U.S. The recent recession is causing many Japanese corporations to focus on short to medium-term projects and this may erode Japan's long-term plan for leadership in this field.

In Europe, a large number of biotechnology companies have been established as a result of several industry programs introduced by the EC. In addition, most major pharmaceutical and chemical manufacturers in Europe have begun to incorporate biotechnology-related activities into their strategic planning and are backing these operations with significant levels of investment.

Indigenous bio-industries are also developing in the Pacific Rim and Latin America. With government support, large industrial corporations in traditional industries are making sizeable investments in biotechnology as a means of diversification. These industries, however, are still at very early stages of development and it is questionable whether the research base is sufficient to support significant growth. This emerging market presents some very real opportunities for alliances based on access to developing markets, in return for access to technology and know-how.

In all geographic areas, long lead-times and costly development and approval processes are making business alliances essential. Perhaps more than any other industry, ability to develop international alliances for research, investment and marketing has become a critical prerequisite for competing in this industry. It is estimated that U.S. companies formed over 1 000 strategic alliances with other U.S., European or Japanese companies between 1975 and 1991.

Canadian Position

Number of Firms	300
Industry Revenues	\$1 billion, 65 percent for export. Exports are projected to grow 50 percent annually in the coming years.
Employment	approximately 7 200

The growth of many Canadian biotechnology companies has been fuelled by cross-border alliances and joint ventures. Unlike the companies in many other OECD countries, Canadian resource-based companies have been slow to adopt productivity-enhancing biotechnologies, and this has slowed the development and sales growth of younger biotechnology enterprises in the domestic marketplace. Canadian biotechnology companies, however, have been quite successful in forging

relationships with foreign companies for the necessary capital, research and distribution capabilities to compete internationally.

International competition facing Canadian biotechnology companies is likely to increase. Along with the rise in international alliances, mergers and acquisitions worldwide are consolidating the industry. Canadian firms will be challenged to bring higher-quality products and services to market with less development time and at lower costs.

CANADIAN BIOTECHNOLOGY INDUSTRY

Infrastructural Advantages

- strong public funding for biotechnology research in health care, agriculture, forestry and other key disciplines
- tax environment conducive to in-house R&D (small and medium-sized Canadian biotechnology firms spent \$500 million on R&D in 1991)
- a strong technology-transfer orientation within university and government labs.

Recognized Strengths

- agricultural applications for biotechnology — leadership position
 - excellent clinical and field trials capabilities.
-

A number of obstacles currently stand in the way of Canadian companies meeting these objectives:

- the absence of ready access to capital to finance development costs
- a need for greater marketing experience and expertise for products and services with limited recognition in international markets
- a need for more manufacturing expertise and facilities
- limited access to trained personnel at the research and especially at the production level
- difficult regulatory and intellectual property system.

Strategic Direction

Efforts to support Canadian bio-industries will focus on two broad themes:

- developing strategic alliances to access financing, develop international distribution and research capabilities
- promoting Canadian biotechnology capabilities in emerging markets.

Canada

Encourage foreign companies to participate in domestic programs with Canadian companies for the purposes of building strategic and investment partnerships in order to bolster exports and job creation. Work actively with the industry associations in Canada to assist companies in developing these business opportunities. Employ the National Biotechnology Advisory Committee as a sounding board for further biotechnology-related policies in Canada. (DFAIT, Industry Canada, Posts)

U.S.

In cooperation with industry, hold investment/partnering seminars and round tables to provide opportunities for Canadian firms to interact with leading U.S. pharmaceutical and investment groups. (DFAIT, Posts, Industry Canada)

Europe

Develop investment/partnering initiatives on a country-specific basis with a focus on Italy, the U.K., France and Germany to help Canadian bio-industries position themselves to attract investment capital. (DFAIT, Posts, Industry Canada)

Latin America

This region's increasing concern with environmental issues will present opportunities for promotion of Canadian firms with niche products and services relating to environmental remediation, conservation and sustainable development.

NAFTA also raises the issue of growing markets in Mexico and certain parts of Latin America. Agricultural and environmental applications of biotechnology are of particular interest in these regions and government will work with export-ready bio-industries to identify potential joint-venture partners for business development in these regions. (Industry Canada, DFAIT, Posts)

Asia-Pacific Region

Encourage the building of networks involving government, academia, business associations and private-sector brokers for linking bio-industries in Canada with their counterparts in the Asia-Pacific region. This network will gather and disseminate market and business intelligence to Canadian bio-industries as well as promote Canadian capabilities in the Asia-Pacific region.

The members of this network will be called upon to facilitate the generation of trade, technology transfer and investment linkages amongst bio-industry firms in Canada and in the Asia-Pacific region.

Agricultural and environmental applications of biotechnology are of particular interest in these regions and government will work with export-ready bio-industry firms to identify potential joint-venture partners for business development in these regions. (Industry Canada, DFAIT, Posts)

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Contact

Biotechnology Directorate
Materials, Chemicals and Bio-Industries Branch
Industry Canada
Tel.: (613) 954-4715
Fax: (613) 952-4209

Biotechnologies

Activity	Date	Location	Dept.	Contact
East Asia				
Biotechnology Seminar	May 1994	Taipei, Taiwan	DFAIT	(613) 995-8705
Incoming Ginseng Buyers Mission	Nov 1994	Ontario*	OMAF	(416) 326-3510
Japan				
Bovine Genetics Business Plan	TBD*	Japan* Southeast Asia*	DFAIT	(613) 995-8619
Kansai Biotechnology Mission to Canada	Sep 1994	Canada*	DFAIT	(613) 995-8596
Bio-Japan 94	Nov 1994	Osaka, Japan	DFAIT	(613) 995-8596
Latin America and the Caribbean				
Expo Medica '94	Oct 1994	Panama*	DFAIT	(613) 996-6921
Multiple Markets				
Developing Country Markets for Canadian Bio-Industry Firms: Promoting Trade through Business Networks	Apr 1994	Asia Pacific* Latin America*	Industry Canada	(613) 954-3065
Bio '94 — 8th International Biotechnology Management and Exhibition & 6th Annual BIO Council of Biotechnology Centres Meeting	May 1994	Toronto, Ontario	Industry Canada	(613) 954-3064
Fourth Pacific Rim Biotechnology Conference	Feb 1995	Melbourne, Australia	Industry Canada	(613) 954-1035
United States				
Biotech Newsletter	TBD*	Los Angeles, California	DFAIT	(613) 944-9482
Biotechnology Breakfast Seminars	TBD*	San Diego, California Philadelphia, Pennsylvania Princeton, New Jersey Chicago, Illinois Los Angeles, California Minneapolis, Minnesota Other cities*	DFAIT	(613) 944-9482
Paine Webber Conference	TBD*	San Diego, California	DFAIT	(613) 944-9482
Connect Biotech Corporate Partnerships Series	Apr 1994	San Diego, California	DFAIT	(613) 944-9482
Strategic Partnering Biotech Mission to San Francisco	Oct 1994	San Francisco, California	DFAIT	(613) 944-9482
Western Europe and European Community				
Strategic Partnership in Europe	TBD*	Various Western European countries*	DFAIT	(613) 992-5339
Mission to Carrefour des Biotechnologies	Apr 1994	Laval, Quebec	DFAIT	(613) 996-2363
Bio Roundtable	Oct 1994	TBD*	DFAIT	(613) 996-3774

* Exact dates and/or cities to be determined.

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 - Chemicals and Petrochemicals
 - Plastics and Polymer Products
9. Consumer Products
 - Apparel Industry
 - Business and Institutional Furniture
 - Footwear
 - Hardware and Housewares
 - Household Furniture
 - Sporting Goods (including recreational watercraft)
 - Textiles
10. Defence and Related Products
 - Aviation, Marine and Defence Electronics
 - Marine and Land Defence Systems
11. Electrical and Energy Equipment
 - Electrical Equipment
 - Oil and Gas Field Equipment
12. Environmental Industries
13. Fish and Seafood Products
14. Forest Industries
15. Industrial Technologies
 - Agricultural Technology, Machinery and Equipment
 - Mining — Forestry — Pulp and Paper
 - Ocean and Marine Shipboard Technology
16. Information Technologies
17. Medical and Health-care Products
18. Minerals, Metals, Advanced Materials and Construction Products
19. Space
20. Tourism
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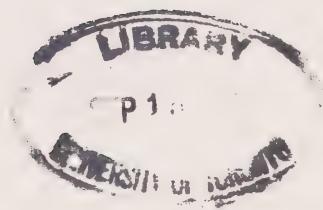
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Doing Business Abroad



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Business and Professional Services

The business and professional services sector encompasses several subsectors such as accounting, consulting engineering, management consulting, scientific services, architectural services, financial services, communications services, environmental services, construction services, geomatic services, legal services, design services, computer services, personnel services, security services, training services, transportation and logistic services, distribution (retail and wholesale) services and health-care services.

International Environment

Business and professional services are services sold to businesses, rather than to final consumers. They account for an estimated 20 percent of world trade. In recent years, these services have become the fastest-growing component of international trade with an average annual growth rate of 8 percent.

Over the past decade, the growing demand for business and professional services in both developed and developing countries has resulted in a rapid growth in trading in this area. Three primary characteristics of the services sector have contributed to this growth and the increasingly competitive conditions in this sector's markets:

- **Globalization** — New service export opportunities are emerging as a result of new trade policies. GATT, NAFTA and the EC, all have provisions that have opened markets and increased the trade in services.
- **Product-Service Linkage** — The distinction between products and services is becoming increasingly blurred, and the export value of machinery often includes up to a 40-percent service input. In many situations, provision of the related services is a condition of the sale of the goods.
- **Partnering** — Due to the increased competition, especially with respect to construction and capital projects, firms from countries like Canada are increasingly teaming up, in order to face their large international competitors.

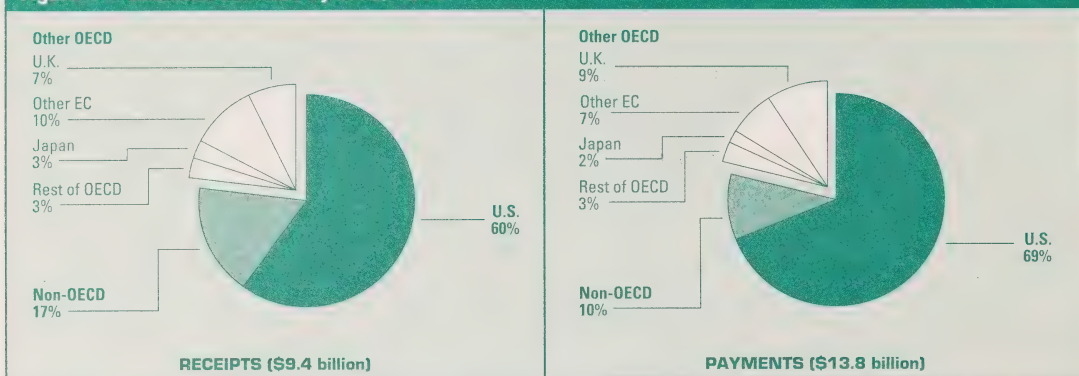
The major exporting countries in this sector are the members of the OECD. Each is a strong competitor, having its own areas of specialization or dominating specific markets. The U.S. remains the overall leader in service exports, however. Non-OECD countries such as the Republic of Korea, Brazil, India and Mexico, are emerging as serious international contenders. The major importers of services are the U.S., Pacific Rim countries, south Asia, Africa and the Middle East (see Figure 1).

Canadian Position

As a result of the growing importance of the services sector in the Canadian economy, it now represents about two thirds of total GDP. The services sector has contributed to the creation of approximately 90 percent of Canada's new jobs in the past decade and represents over 72 percent of total employment in Canada.

Within the Canadian services sector, business and professional services have been the major growth area and now account for over 40 percent of total services output. Over the past decade, Canada's exports of business services increased at an average annual rate of 10.2 percent (see Figure 2), outpacing imports which grew by 8.5 percent. Most services exports are to the U.S., but an increasing number of Canadian firms are succeeding in other foreign markets, such as western Europe and the Asia-Pacific region.

Figure 1 — Business Services by Area, 1992



Source: Statistics Canada, *Canada's International Transactions in Services*, Catalogue No. 67-203, annual.

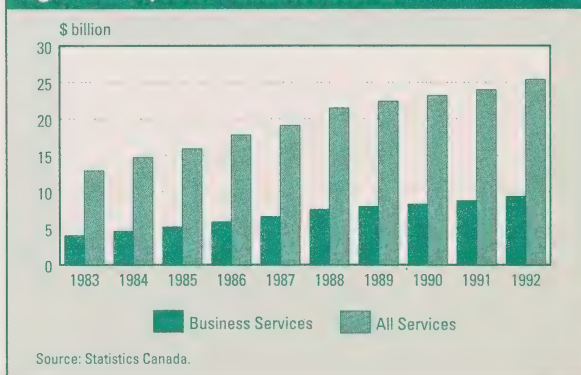
Canadian services firms have already gained international success and prominence. Based on these successes, many services subsectors have identified several priority markets.

- **Consulting Engineering, Architectural Services and Construction** — These specialized services will continue to be in demand around the world. Canadian firms will have to form alliances, joint ventures and consortia to compete for integrated projects in developed and developing countries.
- **Environmental Services** — As a result of increased environmental controls, there are vast opportunities for Canadian service exporters in the U.S., Latin America, eastern Europe and the Asia-Pacific region.
- **Health-care Services** — Growing incomes, combined with extensive health-care needs in the Asia-Pacific region, Latin America and the Caribbean, are opening significant opportunities for Canadian health-care services providers.
- **Management Consulting Services** — Most market economies have well-established consulting expertise and niche expertise is often required. Canadian firms' strengths include training, privatization, auditing,

and services related to the resource, financial and transportation sectors. Opportunities also exist in a number of offshore markets such as eastern and central Europe where Western-style economies are emerging.

- **Financial and Legal Services** — Globalization trends and the need to be close to clients will encourage the establishment of international entities, especially in areas such as the U.S., Latin America and Asia. For Canadian banks, the U.S. remains a priority market. The Mexican market

Figure 2 — Exports of Business Services



will offer attractive opportunities under NAFTA, which was implemented on January 1, 1994. Asia is another priority market, where the possible relaxation of regulatory barriers may create attractive opportunities.

- **Education and Training Services** — Enormous needs for education and training services will exist in the developing world, the former U.S.S.R. and eastern Europe, as well as in commercial markets in the OECD. Trends indicate that aid agencies are providing increased funding for these types of services.
- **Trading Houses** — Major markets exist in the Caribbean, Central and South America, the Middle East, the former U.S.S.R. and the Indian subcontinent.
- **Distribution and Transportation Services** — Retail, food service, wholesale distribution networks and courier services may be areas of opportunity in central and eastern Europe as well as Mexico.

Many business and professional services firms have gained international prominence. The FTA and NAFTA should assist Canadian firms as they increase their efforts to penetrate U.S. and Latin American markets. Canadian services firms should also target the Asia-Pacific region and others, where the financing of projects by International Finance Institutions (IFIs) figures prominently, and the Middle East, which offers attractive opportunities for services exports.

Given these potential markets, Canada is capable of achieving comparative and competitive advantages in a range of services related to areas such as the following:

- mining and resource processing, forestry, agriculture, and hydroelectric power generation and distribution
- Canada's geography and climatic conditions, e.g., exploration services, engineering services, construction, resource-based scientific services and environmental services

- overland transportation and communications, particularly for sparsely populated regions
- business services in high-technology fields, e.g., geomatics, biotechnology, computer communications and systems integration and software, including related training and after-sales services
- capital project management services in oil and gas, transportation and tourism-resort development.

Strategic Direction

The following measures are recommended to encourage and increase the export development of Canadian service firms during the next few years.

- Build further technology/marketing relationships between Canadian goods and services providers in Canada so as to compete internationally. Initial emphasis will be on increasing the number of services firms on databases such as the Business Opportunities Sourcing System (BOSS) and the World Information Network (WIN) Export. DFAIT and Industry Canada will have increased discussion with industry associations on member interest in partnerships and alliances.
- Increase partnering between Canadian and foreign firms to offer competitive bids integrating each party's skills. Export promotion activities by DFAIT and Industry Canada will facilitate and encourage this trend by increasing Canadian services firms' profile, visibility and credibility on the international scene. These activities would include the promotion of networking opportunities, identification of potential partners and showcasing opportunities ranging from trade fairs and missions to conferences, seminars and media events.

- DFAIT will help Canadian firms identify foreign business opportunities by preparing selected market-intelligence studies in close cooperation with industry.
- DFAIT is improving its training programs for Trade Commissioners to expand their knowledge of Canadian services companies to help them better meet these firms' international business requirements. The new training programs for Trade Commissioners will help them understand services firms' special needs and opportunities and facilitate the customizing of trade programs for businesses in this sector.
- Provide export skills training to industry associations. The services sector is dominated by small and medium-sized enterprises with specialized skills, but often limited marketing expertise. DFAIT's program will include workshops on establishing export committees, the planning of trade development initiatives and developing market entry tools such as country-specific videos and multimedia promotion kits.
- Build international financing support for Canadian services companies to compete abroad. DFAIT's activities will include building support through domestic agencies such as the EDC, CIDA, CCC and IDRC.

- DFAIT and Industry Canada will hold discussions with industry associations on methods for distributing information to member firms. They will also increase awareness of projects sponsored by development banks as a leading source of goods-and-services export opportunities in developing countries.
- Statistics Canada will develop industry statistics, in cooperation with Industry Canada and industry associations, to gain a better understanding of Canada's services industries in an international context.

Contacts

Business and Professional Services
Industries Directorate
Business Services Industries Branch
Industry Canada
Tel.: (613) 954-2949
Fax: (613) 952-9054

Services Industries and Transportation Division
Department of Foreign Affairs and
International Trade
Tel.: (613) 992-0484
Fax: (613) 996-1225

Business and Professional Services

Activity	Date	Location	Dept.	Contact
ExportVision — Services	Oct 1994	Canada*	DFAIT	(613) 996-8099
Africa and the Middle East				
Construction and Environmental Products & Services Mission	Aug 1994	Amman, Jordan	DFAIT	(613) 944-6994
Mining Mission (Equipment and Services)	Sep 1994	Ghana* and/or Namibia*	DFAIT	(613) 944-5997
Outgoing Trading Houses to North Africa/Middle East (Forestry)	Oct 1994	Alexandria, Egypt Cairo, Egypt Middle East*	DFAIT	(613) 944-0396
Strategic Environmental Market Assessment	Oct 1994	Cape Town, South Africa Johannesburg, South Africa Durban, South Africa	Industry Canada	(613) 954-3382
Outgoing Informatics Mission	Nov 1994	Rabat, Morocco	DFAIT	(613) 944-0396
Education Study Follow-up	Jan 1995	West Africa*	DFAIT	(613) 944-5997
Informatics & Telecom Seminar/Mecom '95	Jan 1995	Bahrain*	DFAIT	(613) 944-6994
Jeddah C of C Environmental Equipment & Services Incoming Mission	Mar 1995	Toronto, Ontario Montreal, Quebec Vancouver, B.C.	DFAIT	(613) 944-5984
Asia Pacific South				
Strategic Partner Seminars	Aug 1994	Sydney, Australia	DFAIT	(613) 995-7662
Central/Eastern Europe and the Commonwealth of Independent States				
Environmental Technologies & Services	Jun 1994	Bucharest, Romania	DFAIT	(613) 992-1449
Association of Consulting Engineers of Canada-East Europe	Sep 1994	Warsaw, Poland Prague, Czech Republic Budapest, Hungary Sofia, Romania	DFAIT	(613) 996-6189
Transtec '94	Sep 1994	St. Petersburg, Russia	Industry Canada	(613) 954-2984
East Asia				
Management Consultant Mission to Asia	Apr 1994	Beijing, China Hong Kong Singapore	DFAIT	(613) 992-0484
High-Tech Investment Opportunity	Sep 1994	Taipei, Taiwan	DFAIT	(613) 996-7582

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
Incoming Port Visit	Sep 1994	Ho Chi Minh, Vietnam	DFAIT	(613) 995-8744
Construction Materials and Services	Oct 1994	Ho Chi Minh, Vietnam	DFAIT	(613) 995-8744
Latin America and the Caribbean				
Franchise Mission to Mexico	TBD*	Mexico*	Industry Canada	(613) 954-2987
Expomin '94	May 1994	Santiago, Chile Lima, Peru Buenos Aires, Argentina Belo Horizonte, Brazil	DFAIT	(613) 996-5358
Strategic Alliance Scoping and Environmental Market	Sep 1994	Lisbon, Portugal Bilbao, Spain Barcelona, Spain Madrid, Spain	Industry Canada	(613) 954-3382
Venezuelan Gold Symposium '94	Oct 1994	Caracas, Venezuela	DFAIT	(613) 996-5548
Association of Consulting Engineers of Canada-South America	Nov 1994	Caracas, Venezuela Brasilia, Brazil São Paulo, Brazil Lima, Peru Quito, Ecuador	DFAIT	(613) 996-5549
Mining Equipment/Services to Mexico	Dec 1994	Mexico*	DFAIT	(613) 996-8625
Multiple Markets				
Government Assistance & Trade Development Programs	May 1994	Canada*	DFAIT	(613) 992-0484
How to Network with Members	May 1994	Canada*	DFAIT	(613) 992-0484
How to Set up Export Committees	May 1994	Canada*	DFAIT	(613) 996-8818
International Opportunities Seminars	May 1994	Canada*	DFAIT	(613) 996-8818
Freight Forwarding Industry Global Communications	May 1994	Vancouver, B.C.	Industry Canada	(613) 954-2961
International Franchising: Information Sources	Jun 1994	Canada*	Industry Canada	(613) 954-2987
Association of Consulting Engineers of Canada	Feb 1995	Manila, Philippines Tokyo, Japan Beijing, China Shanghai, China Guangzhou, China Hanoi, Vietnam	DFAIT	(613) 996-8818
Inter Comm '95 Global Telecom Congress & Exhibition	Feb 1995	Vancouver, B.C.	Industry Canada	(613) 998-0416

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
United States				
Road to Success	TBD*	Canada*	DFAIT	(613) 944-9440
Strategic Alliances of Public Relations and Advertising Firms in Seattle, Portland, Spokane with Western Canadian Firms	TBD*	Seattle, Washington	DFAIT	(613) 944-9440
Services in Software	Apr 1994	Cincinnati, Ohio Cleveland, Ohio Detroit, Michigan Indianapolis, Indiana	DFAIT	(613) 944-9440
Sustainable Design; Canadian Architect Presentations	Apr 1994	California*	DFAIT	(613) 944-9440
How to Develop Exporting/Marketing Strategies	May 1994	Canada*	DFAIT	(613) 992-9440
Accounting Show and Conference	May 1994	New York City, New York	DFAIT	(613) 944-9440
Intermodal '94 Transportation Atlanta	May 1994	Atlanta, Georgia	DFAIT	(613) 944-9440
National Conference — American Institute of Architects	May 1994	Los Angeles, California	DFAIT	(613) 944-9440
New England Media Presentation — Computer Software	Jun 1994	Boston, Massachusetts	DFAIT	(613) 944-9440
Professional Services Seminars	Jun 1994	Detroit, Michigan Indianapolis, Indiana Cleveland, Ohio	DFAIT	(613) 944-9440
Taxation Seminar	Jun 1994	Buffalo, New York	DFAIT	(613) 944-9440
Workshop for New Exporters — Mining Sector	Jun 1994	Toronto, Ontario	DFAIT	(613) 944-9475
Information Conference and Partnering Opportunity Transportation Services	Jul 1994	Seattle, Washington	DFAIT	(613) 944-9440
Outgoing Mission; Geomatics Partnering	Aug 1994	Boston, Massachusetts	DFAIT	(613) 944-9440
Urban & Regional Information Systems Association (URISA)	Aug 1994	Milwaukee, Wisconsin	DFAIT	(613) 944-9440
Geomatics Mission in Conjunction with Federal/ Geog. Tech. Conf.	Sep 1994	Washington, D.C.	DFAIT	(613) 944-9440
Outgoing Mission of Canadian Hospital Architects and Facilities Managers	Oct 1994	Pittsburgh, Pennsylvania	DFAIT	(613) 944-9440
Outgoing Mission to Minneapolis, Denver — Mining Sector	Oct 1994	Minneapolis, Minnesota Denver, Colorado	DFAIT	(613) 944-9475
Services Partnering Initiative	Nov 1994	Boston, Massachusetts	DFAIT	(613) 944-9440

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
Architects Mission to the Superior Design Conference	Jan 1995	Duluth, Minnesota	DFAIT	(613) 944-9440
Commercial Matchmaking J.V. for Canadian Service Providers, Importers/Exporters	Jan 1995	Buffalo, New York	DFAIT	(613) 944-9440
Conference & Media Presentations	Jan 1995	Atlanta, Georgia	DFAIT	(613) 944-9440
Media Presentations (2) Geomatics & Eng. Services	Jan 1995	New York Tri-State area*	DFAIT	(613) 944-9440
Informatics Marketing Strategies for Government	Feb 1995	Canada*	DFAIT	(613) 944-9440
Environmental Matchmaking Mission (SF)	Mar 1995	Los Angeles, California	DFAIT	(613) 944-9440

Western Europe and European Community

Outgoing Consulting Engineering Partnering Mission	Oct 1994	Copenhagen, Denmark	DFAIT	(613) 995-4730
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* Exact dates and/or cities to be determined.

Canada's International Trade Business Plan is made up of three key components: a Strategic Overview, a series of industry sector strategies, and an accompanying series of international activities lists. Industry sectors available include:

1. Advanced Manufacturing Technologies
2. Aeronautics
3. Agri-Food Products
4. Arts and Cultural Industries
5. Automotive
6. Biotechnologies
7. Business and Professional Services
8. Chemicals and Plastics
 - Chemicals and Petrochemicals
 - Plastics and Polymer Products
9. Consumer Products
 - Apparel Industry
 - Business and Institutional Furniture
 - Footwear
 - Hardware and Housewares
 - Household Furniture
 - Sporting Goods (including recreational watercraft)
 - Textiles
10. Defence and Related Products
 - Aviation, Marine and Defence Electronics
 - Marine and Land Defence Systems
11. Electrical and Energy Equipment
 - Electrical Equipment
 - Oil and Gas Field Equipment
12. Environmental Industries
13. Fish and Seafood Products
14. Forest Industries
15. Industrial Technologies
 - Agricultural Technology, Machinery and Equipment
 - Mining — Forestry — Pulp and Paper
 - Ocean and Marine Shipboard Technology
16. Information Technologies
17. Medical and Health-care Products
18. Minerals, Metals, Advanced Materials and Construction Products
19. Space
20. Tourism
21. Urban Transit and Rail

For information on how to receive the Strategic Overview, or additional industry sector strategies and international activities lists, please call: **1-800-267-8376**



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Canada's International Trade Business Plan

1994-1995

*An Integrated Plan for Trade, Investment
and Technology Development*



Doing Business Abroad



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Chemicals and Petrochemicals

This industry is divided into two parts, the chemicals and petrochemicals subsector, and the plastics and polymer products subsector. For practical reasons, the two subsectors will be discussed separately.

The chemicals industry makes more than 60 000 products from a wide range of metals, minerals, crude oil, natural gas, vegetable oils, animal fats and other raw materials. These products include commodity inorganic and organic chemicals, resins, elastomers, fertilizers and crop protection chemicals, fine and specialty chemicals encompassing pharmaceuticals, paints and varnishes, soap and cleaning compounds.

International Environment

Chemicals and petrochemicals represent a major global industry that accounts for a significant share of foreign direct investment and international trade. Global chemicals production in 1992 is estimated at US\$1.27 trillion. The U.S. chemical industry is the world's largest, followed by Japan, Germany and France. Trade in chemicals is fiercely competitive, with producers active on a global scale. Total world exports of chemicals amounted to about US\$175 billion in 1991. Germany is the largest exporter, followed by the U.S. About 20 multinational enterprises (MNEs) account for 25 percent of worldwide sales.

Having developed significant petrochemical capacity over the past 10 years, Middle Eastern countries are now competing with traditional petrochemical exporting countries (i.e., the U.S., Japan and western Europe). Newly industrialized countries such as the Republic of Korea and Taiwan are also developing domestic chemical capacity to satisfy growing local markets and to take advantage of export opportunities. Indeed, the Asia-Pacific region is forecast to be the fastest-growing chemical market.

Globalization has precipitated a major restructuring of the industry, particularly within Europe and North America. Competition is increasingly organized along the lines of the three emerging trading blocs: North America, western Europe and the Asia-Pacific region.

The following factors are having a major impact on the world chemicals industry:

- increasing competition and trade liberalization arising from the FTA, which was implemented on January 1, 1989, the NAFTA, which was implemented on January 1, 1994, and, potentially, the Uruguay Round GATT negotiations
- growing public concern about how chemical products are produced, marketed and disposed of, and the resulting demands for new "environmentally friendly" products and technologies
- changing industry dynamics and product definitions resulting from the evolution of science and engineering into new fields and the development of new products that cut across disciplines; competitiveness is increasingly tied to developing cross-disciplinary teams of technical experts to define R&D and commercial prospects
- the globalization of the industry in general, which means that individual firms are unlikely to grow and prosper without the benefit of mutually reinforcing supplier capabilities, or close competitors and external innovation catalysts within their domestic or continental industrial "cluster"
- the trend among developed economies to place increasing emphasis within the chemicals sector, on more sophisticated products with higher value-added

- competition among various units within MNEs for the right to continue, and to have product mandates for certain products.

Canadian Position

Based on the value of shipments (\$22 billion in 1992, about 7.8 percent of total manufacturing activity), the chemical sector is Canada's third-largest manufacturing sector. In 1992, employment in the sector was approximately 82 000 — about 5.3 percent of manufacturing employment. It also ranked third in value-added.

Imports and exports in 1992 totalled \$10 billion and \$6.8 billion respectively. Imports represented 35 percent of the domestic market and were made up largely of specialty and formulated chemicals tailored for specific end uses. Exports were primarily commodity products and accounted for 31 percent of factory shipments. Overall, the U.S. accounted for 75 percent of Canada's imports, and received 75 percent of our exports (see Figure 1).

Canadian-owned chemical firms tend to be small and primarily serve niche markets. Production is normally geared to domestic (often regional) markets. Now, however, Canadian producers are beginning to take advantage of opportunities arising from the FTA. This trend is likely to continue as NAFTA comes into force. Indeed, many larger companies have already rationalized their operations in terms of the larger North American market. This has meant the closing of Canadian branch plants in some cases, but also the opportunity to supply from Canada in other cases.

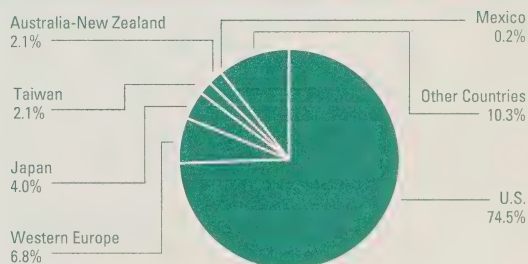
Compared to their international competitors, Canadian chemical companies have tended to be driven by a short-term cost focus (as opposed to a longer-term innovation focus). There is a tendency among Canadian companies to be production-oriented, while placing insufficient emphasis on marketing.

The Canadian commodity chemicals sector — particularly the ammonia and petrochemicals subsectors — remains competitive due to the availability of competitively priced oil and gas. For specialty and fine chemicals, however, a large number of proprietary products developed outside Canada are imported since, in many cases, the Canadian market is not large enough to justify production. In other cases, producers must frequently rely on raw materials and specialized components that are not readily available in Canada. Overall, Canada has a net trade deficit for these chemicals of about \$1.5 billion.

Nevertheless, the specialty chemicals subsector does support a large number of small and medium-sized firms (along with the MNEs). They typically have been producing a relatively extensive range of products in small quantities, almost exclusively for the domestic market.

Given the FTA and NAFTA, this sector has an opportunity to expand beyond the domestic market. To do so, however, companies will face pressures to rationalize their product lines to become lower-cost producers. As well, given that specialty chemicals are knowledge-based, the sector must also look to rapid adoption of new technology through technological transfer.

Figure 1 — Canada's Principal Export Markets* for Chemicals and Chemical Products, 1992 (% of Total)



* Excluding potassium chloride and plastic fabricated products.
Source: Statistics Canada, tabulation from Tradesys Tape, July 1993.

In the human resources area, rationalization has meant that many key technical, marketing and management positions have disappeared from Canadian operations. To a large extent, industry management remains focused on manufacturing and domestic marketing. Greater emphasis is needed on enhancing knowledge of innovation and world markets. For Canadian subsidiaries, the winning of research and manufacturing mandates from the parent company is a key to growth. The adequate supply of qualified Canadian science and technology graduates should enable Canadian subsidiaries to make a strong case for winning manufacturing and R&D mandates.

R&D in the Canadian chemicals sector has been limited, in part due to the influence of MNEs. As a result, there has been an inevitable bias toward acquiring off-the-shelf technology, as opposed to developing it in Canada. However, the current 20-percent tax credit (non-refundable) available to Canadian companies, plus the provisions of the Scientific Research and Experimental Development Program (i.e. as of May 1985, a fully refundable tax credit of 35 percent, up to \$2 million, for qualified Canadian-controlled private companies) has established a taxation climate in Canada as favourable, and in some cases more favourable, than in any other developed country.

For the chemical industry, which tends to be capital-intensive in nature, costs such as construction, transportation, labour and input are critical components of the competitiveness equation. Canadian locations have, however, proven that they can compete with those of other industrialized countries.

Over the next five years, given the expected reduction in trade restrictions, the sector can expect changes as MNEs implement their global rationalization strategies. The resulting restructuring should leave the Canadian operations of MNEs globally competitive. Their suppliers would also be forced to achieve global competitiveness, if only to maintain domestic accounts in a market more open to foreign competition.

Regarding the state of the Canadian chemicals industry in the wake of such changes, the future holds essentially two possibilities. The pessimistic scenario from a Canadian perspective, would be an industry of reduced size — perhaps just a rump industry, concentrating on fewer products but able to hold its own internationally, and thus capable of surviving.

The optimistic scenario would see an industry also concentrating on a reduced product line, but capable of growth through expansion into export markets, regardless of whether restructuring reduced its size. (The more liberalized trading regime effected by the FTA has resulted in increased exports for the Canadian industry.) Such a scenario depends upon appropriate policies on the part of government and industry. Assuming such policies, one could expect a sector which could decline in size over the next five years, but reach new heights of production and sales over a 10-year period, taking advantage of specialization in production and improved competitiveness.

Strategic Direction

The Canadian government, in partnership with industry, will work to:

- promote multinational investment in the Canadian chemical industry by demonstrating that Canada provides a competitive environment (Industry Canada, DFAIT)
- support companies to innovate through increased commitment to R&D, both through in-house research and by acquiring leading-edge technologies (Industry Canada, NRC, DFAIT)
- develop an export development strategy which encourages companies, particularly small and medium-sized firms, to think globally and to become proactive in developing potential markets and forging strategic alliances (DFAIT, Industry Canada)

- continue to identify parts of the sector whose potential to exploit high-opportunity niche markets has not yet been fully tapped (e.g. specialty chemicals) and assist the entry of such companies into the export arena (Industry Canada, DFAIT)
- encourage companies, particularly small and medium-sized, to form strategic alliances with suppliers, customers and others, and to participate in mutually beneficial business networks (Industry Canada, DFAIT).

Contacts

Chemicals, Plastics and Advanced
Materials Directorate
Materials, Chemicals and Bio-industries Branch
Industry Canada
Tel.: (613) 954-3016
Fax: (613) 952-4209

Sectoral Liaison Secretariat
Department of Foreign Affairs and
International Trade
Tel.: (613) 996-4209
Fax: (613) 943-1103

Plastics and Polymer Products

The plastics and polymer products sector comprises industries manufacturing synthetic resins, compounded resins, plastic products, industrial rubber products, paints and coatings, adhesives and sealants, and printing inks.

International Environment

The resin industry is dominated by MNEs (Dow Chemical, Dupont, Novacor, BF Goodrich, etc.), which operate on a global basis. Most are foreign-owned. The downstream industries are comprised of subsidiary operations of MNEs and Canadian-owned businesses. The subsidiary operations tend to be larger in size, while the domestic SMEs are more numerous. The relative balance between these two groups varies by industry.

Canadian Position

The principal markets for plastics and polymer products are the packaging, construction and automotive industries.

Based on 1992 information, the sector employs about 90 000 people. Domestic shipments was estimated to be \$12.7 billion. Imports in 1992 were valued at \$5.5 billion compared to exports of \$3.4 billion, for a net trade deficit of \$2.1 billion.

Canada's trade in plastics and polymer products with the U.S. represents typically between 80 to 95 percent of both imports and exports. The sole exception is synthetic resins, where 70 percent of exports go to the U.S., with 25 percent going to the Pacific Rim. Over the past several years, the plastics and polymer products sector has experienced increases in both imports and exports, driven primarily by the FTA and globalization. The FTA is prompting MNEs to rationalize their operations on a North American basis, while encouraging domestic firms to enter the U.S. market.

Within this grouping, synthetic and compounded resins, and certain plastic products offer the greatest potential for improving Canada's trade balance. Most of the net trade growth of synthetic resins is expected to come from

polyethylene. In other compounded resins, those used in high performance plastics offer the best opportunity. The export potential of plastic products is often limited by transportation costs and a lack of product differentiation compared to foreign producers. The two areas that are believed to offer the greatest export potential for Canada's plastics and polymer sector are construction products and packaging.

Polyethylene

Table 1 – Priority Markets for Polyethylene

First Priority	Second Priority
U.S. West	U.S. Northeast
U.S. Southeast	Indonesia
U.S. Midwest	India
China	Nigeria
Hong Kong	Argentina
	Brazil
	Chile
	Mexico

Within the U.S., Canadian exports of polyethylene are largest in the the Midwest and Northeast regions. The regions where Canadian exports are experiencing the greatest growth are the U.S. West, Southeast and Midwest (see Table 1).

After the U.S., the Asia-Pacific region is Canada's next most important export market for polyethylene (see Figure 1). In the Asia-Pacific region, China is the largest export market, but its annual demand varies considerably. Initiatives leading to increased penetration and predictability in China would be valuable to Canadian exporters. Other markets in the Asia-Pacific region offer long-term potential. While certain countries in the region export polyethylene, overall, it is expected to be a net importer for some time.

Nigeria has shown good recent growth. This is a reflection on demand within the region, since Nigeria serves as distribution centre for that part of Africa.

Many South American countries show export growth from a small base. The most promising region is believed to be the southern part of the continent.

Compounded Resins

Compounded resins are produced by blending functional additives into synthetic resins, yielding feedstock for plastic processors. Data on this group of materials cannot be isolated from data on synthetic resins. However, feedback from previous international activities suggests that the Middle East offers good export potential for high value-added compounds.

Construction Products

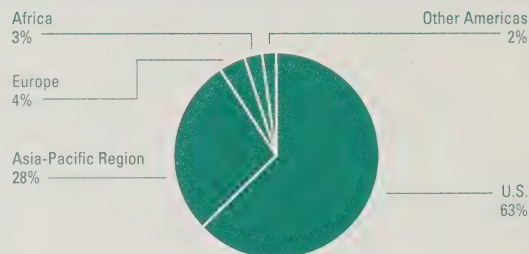
Table 2 — Priority Markets for Construction Products

First Priority	Second Priority
U.S. Northeast	Argentina
U.S. Midwest	France
U.S. Southeast	Hong Kong
U.S. West	Republic of Korea
U.S. South	Taiwan
	Netherlands
	Saudi Arabia
	Mexico

Exports of construction products to the U.S. dominate in this product area (see Figure 2). Exports to all five regions of the U.S. have increased over each of the past two years. The U.S. Northeast, Midwest and Southeast are the largest markets for the Canadian construction products industry (see Table 2). The U.S. South, Southeast and West have been growing at the fastest rates.

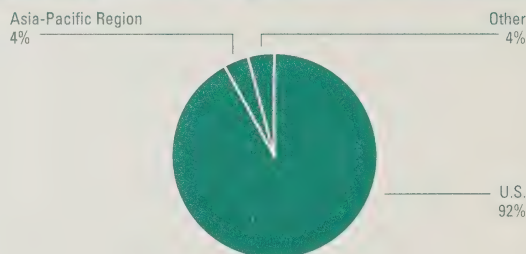
While trade in construction products to the rest of the world is comparatively small, exports to certain countries have shown strong growth over

Figure 1 — Polyethylene Exports by Region, 1992 (% of total)



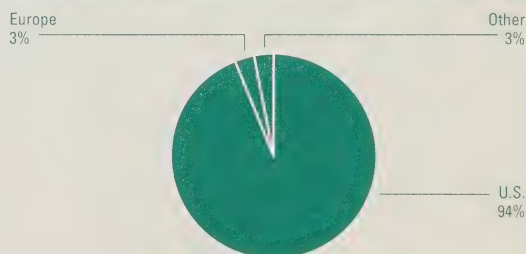
Source: Industry Canada.

Figure 2 — Construction Products Exports by Region, 1992 (% of total)



Source: Industry Canada.

Figure 3 — Packaging Exports by Region, 1992 (% of total)



Source: Industry Canada.

the past two years. These have been highlighted as prospects for trade promotion. Several of these countries are in east Asia, reflecting the strength of those economies and their relatively high level of construction activity. The other countries are scattered throughout the world.

Packaging

Table 3 — Priority Markets for Packaging	
First Priority	Second Priority
U.S. Northeast	U.S. South
U.S. Midwest	France
U.S. Southeast	Belgium
U.S. West	Japan
	New Zealand
	United Kingdom
	Uruguay
	Mexico

Again, exports to the U.S. dominate in the packaging subsector (see Figure 3). The U.S. Northeast and Midwest are our largest markets (see Table 3), while the U.S. Southeast, Midwest and West have experienced the greatest growth.

In the remainder of the world, there is a small cluster of countries in northern Europe that have shown recent growth. The other growth countries are scattered.

In each of the cases mentioned above, the trade data does not justify the inclusion of Mexico as a prospect for strong export growth. However, it is listed as a priority country because the implementation of NAFTA is expected to make the Mexican market more attractive to Canadian companies, either for direct export or for joint ventures whereby Canadian technology is exported.

Strategic Direction

Trade promotion and international activities will focus on:

- encouraging more firms to take advantage of export orientation programs offered by the federal government (Industry Canada, DFAIT)
- encouraging more companies from this sector to participate at trade shows aimed at potential customers, such as the construction and packaging industries (Industry Canada, DFAIT)
- developing new opportunities in the Pacific Rim, primarily in synthetic resins (Industry Canada, DFAIT)
- maintaining awareness of technological advances throughout the world and providing this knowledge to industry (Industry Canada)
- producing strategic information to assist companies with business decisions (Industry Canada).

Contact

Chemicals, Plastics and Advanced
Materials Directorate
Materials, Chemicals and Bio-industries Branch
Industry Canada
Tel.: (613) 954-3016
Fax: (613) 952-4209

Chemicals and Plastics

Activity	Date	Location	Dept.	Contact
Central/Eastern Europe and the Commonwealth of Independent States				
Exporters Seminar in Medical/Pharmaceutical Fields	TBD*	Montreal, Quebec Toronto, Ontario TBD*	DFAIT	(613) 996-7107
East Asia				
International Medical Equipment & Pharmaceutical Show	Nov 1994	Taipei, Taiwan	DFAIT	(613) 996-7582
Latin America and the Caribbean				
Mexiplast	Dec 1994	Mexico City, Mexico	Industry Canada	(613) 954-3011
Multiple Markets				
Technology Transfer Survey	Jun 1994	Canada* France* U.K.* Switzerland* Germany* Italy*	Industry Canada	(613) 954-3263
International Ginseng Conference (IGC '94)	Jul 1994	Vancouver, B.C.	AG CAN	(613) 993-6671
United States				
Society of Plastics Engineers: Annual Technical Conference (ANTEC)	May 1994	San Francisco, California	Industry Canada	(613) 954-3016
National Plastics Expo	Jun 1994	Chicago, Illinois	DFAIT Industry Canada	(613) 944-7486 (613) 954-3011
Paint Show and Exhibition	Oct 1994	New Orleans, Louisiana	Industry Canada	(613) 954-3016
The Society of the Plastics Industry (SPI) Composites Institute Conference and Expo	Feb 1995	Cincinnati, Ohio	Industry Canada	(613) 954-3011
Western Europe and European Community				
Mission to Tut '94 (Salon Texitech)	Apr 1994	Paris, France	DFAIT	(613) 996-2363
Europlast	Oct 1994	Paris, France	Industry Canada	(613) 954-3011

* Exact dates and/or cities to be determined.

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1. Advanced Manufacturing Technologies
2. Aeronautics
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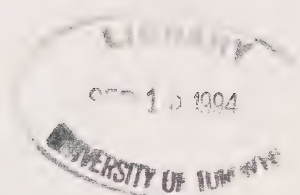
Canada's International Trade Business Plan

1994-1995

*An Integrated Plan for Trade, Investment
and Technology Development*



Doing Business Abroad



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Consumer Products — Apparel Industry

The apparel industry produces all types of apparel for men, women and children including industrial and athletic wear.

International Environment

In 1991, world trade in clothing totalled \$122 billion which represented 5 percent of world manufactured exports. The major apparel exporting countries were Hong Kong, China, Italy, Germany and the Republic of Korea, with the U.S., Germany, Japan, France and Hong Kong being the major importers (see Figure 1).

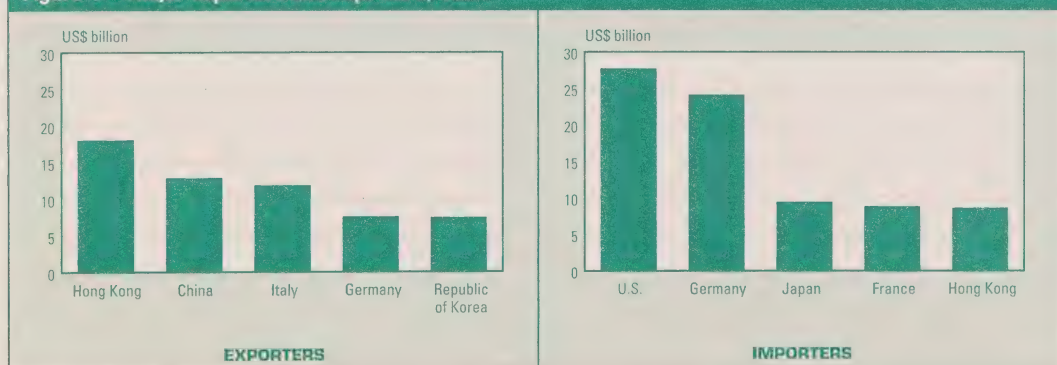
Since 1990, depressed demand has reduced the growth rate in trade in apparel from an annual average rate of 18.1 percent between 1985 and 1990, to 8.6 percent between 1990 and 1991.

With the advantage of lower wage costs and access to a large supply of labour, Far Eastern countries — primarily Hong Kong, China, Taiwan and the Republic of Korea — and eastern European countries have built up large apparel industries geared to servicing the U.S., western Europe, Canada and the other industrialized countries. While imports from the lower-cost countries have adversely impacted on producers of all types of apparel products in the developed

countries, the most severe effect has been on manufacturers of staple commodity products such as dress shirts and blouses, underwear, pants, T-shirts and sweaters.

While labour costs remain a critical factor in the competitive process, other considerations have assumed importance in the marketing of apparel. Producers in many industrialized countries including the U.S., Canada, Germany, France, Italy and the U.K., are adopting more innovative marketing and product strategies such as brand and designer names, electronic data interchange (EDI) and better after-sale service. Producers are also taking advantage of recent advances in manufacturing and information technologies, more effective manufacturing methods such as flexible modular manufacturing systems, just-in-time (JIT) manufacturing configurations and smaller-scale production to offset wage disadvantages. These practices have enabled manufacturers in these countries to make greater inroads into global markets and to better defend their market positions in their own home markets.

Figure 1 — Major Exporters and Importers, 1991



Canadian Position

In 1992, the Canadian apparel industry was composed of over 1 700 establishments producing \$5.8 billion of apparel and employing 87 000 people. Although the industry is located in all provinces, it is especially important in Quebec and Ontario, which account for 54 percent and 31 percent of total industry employment respectively.

Over the years, as in most other industrialized countries, virtually all of Canada's apparel product sectors have had their domestic market share eroded by imports. In 1992, the Canadian industry held an estimated 65 percent of the domestic market compared to 73 percent in 1989, on a value basis (see Figure 2).

This erosion of domestic market share has been one of the major factors in forcing the industry to seek new markets. Currently an estimated 200 companies are engaged in exporting to some degree. A greater portion of industry output is being exported; almost 10 percent in 1992, up from just under 5 percent in 1989. Exports increased by 72 percent, from \$335 million to \$577 million between 1989 and 1992, and it is projected that by the year 2000, they could reach \$1 billion.

The industry's success in export markets can be attributed in part to the growing reputation it is earning in North America for fashion and quality products. Canadian companies are adopting more structured export strategies such as setting up sales offices in the target market, doing more niche marketing and more advertising.

The U.S. has been the Canadian industry's major export market, absorbing 90 percent of Canadian apparel exports in 1992 (see Figure 3).

While the industry exports all types of apparel, in 1992 trousers (20 percent), men's and boys' suits (14 percent), swimwear (13 percent), furs (10 percent) and sweaters (9 percent) were the leading export products. Inroads are being made in many other product areas, however. The

Figure 2 — Shipments, Imports, Exports

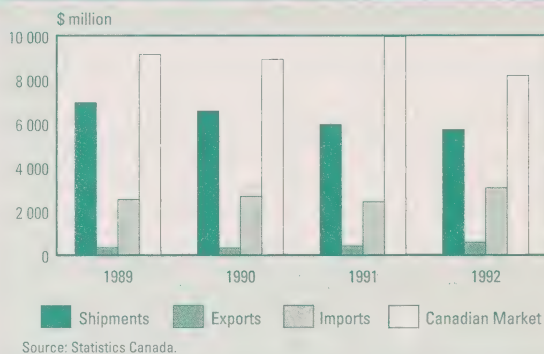
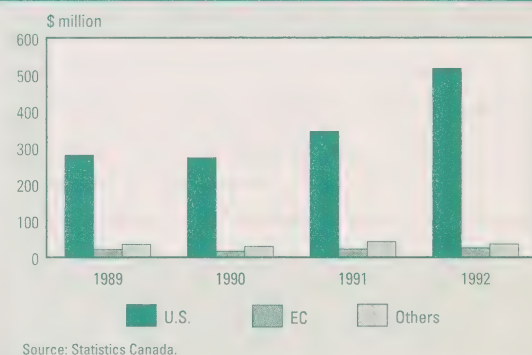


Figure 3 — Exports by Country of Destination



industry's most fertile export opportunities will be in product areas in which there is:

- a high fashion element, or
- a specialized functional design (e.g. survival clothing or industrial protective clothing), and
- cold weather apparel.

These opportunities will be exploited by those companies which can meet the increasingly stringent demands of retailers for quality and delivery, or of institutional buyers for high performance and total reliability.

Despite successes, the industry still has major hurdles to overcome in order to sustain export growth. Many foreign buyers are unfamiliar with Canadian companies' products. The large financial resources required to generate exports often deter many small and medium-sized companies. The absence of sufficient marketing information and the "technology gap" that exists between Canada and the U.S. or Europe are also deterrents.

Strategic Direction

The major challenges for the Canadian apparel industry will be to take advantage of market opportunities within the NAFTA countries and in Europe; to work collectively and aggressively in promoting a higher profile in export markets; to improve manufacturing efficiencies; and to attract people with more technical, managerial and design skills.

Within this framework, the industry plans to:

- expand the product and geographical export base
- develop a human resource training program
- adopt the most suitable technology
- enhance the image of the industry as one that offers career prospects
- ensure that manufacturers have access to the information necessary for effective decision making.

The key components of the government's strategy to further the industry's program are to:

- encourage the development of the newly formed Canadian Apparel Federation (CAF) as the major vehicle to drive industrial and marketing activities; the organization's task will be to plan, coordinate and structure the various marketing, information, technical and training initiatives of the industry

- create closer and more cohesive linkages between the apparel manufacturers, retailers, designers and fabric producers; the Inter-Firm Linkages Program of Industry Canada is expected to lead to the formation of 25 to 30 joint projects among retailers, apparel manufacturers and textile producers (These projects will explore more innovative strategies to cooperate in the production and distribution of apparel products.)
- increase the level of export activity by supporting participation in trade shows, promoting attendance at marketing seminars, and producing and distributing strategic market intelligence (DFAIT, Industry Canada, CAF)
- promote the acquisition and adoption of new technology and production methods through visits to machinery exhibits, technical centres and other manufacturing facilities; establish technology databases; disseminate reports on technological "best practices"; and organize technical seminars. (Industry Canada)

Contact

Textiles, Apparel and Footwear Directorate
Consumer Products Branch
Industry Canada
Tel.: (613) 954-2888
Fax: (613) 954-3107

Business and Institutional Furniture

The business and institutional furniture manufacturing industry consists of establishments engaged in the production of furniture made from metal, wood and other materials. Business furniture products include seating, desks, filing equipment, screens, home/office products and systems furniture. Institutional furniture products include public area, hotel, motel, library, health-care and hospital furniture. The consumers of these products are corporations, institutions, governments, professionals, and to a lesser extent, the residential sector.

International Environment

In 1992, the world market for furniture of all types was estimated in excess of \$140 billion. Global trade in furniture represents about 3 percent of international exports in manufactured products. Although exact worldwide market figures are unavailable, industry estimates place the U.S. at 30 to 32 percent of the furniture market, the EC at about 36 percent, other European countries at 10 percent, Japan at 5 to 7 percent and the rest of the world at 15 percent.

Globally, the furniture market is dependent on trade flows heavily influenced by quality and regional design and styling requirements. There is a high degree of country-specific product identification and manufacturing specialization.

Asian producers are competitive in North America, in ready-to-assemble furniture in the low to medium-price ranges, especially in the expanding desktop office equipment support furniture and systems furniture.

European producers are competitive in the higher-price ranges relative to niche markets both in Canada and the U.S. These seating and office systems imports from Europe usually feature unique design and technical innovations that tend to appear in domestic products for the North American marketplace some six to 12 months later.

The North American market will continue to be the most important segment of global markets (with an estimated market share of some 40 percent) for business and institutional furniture manufacturers. This success is due to common product standards and common characteristics of product design.

Opportunities for business and institutional furniture exist in the new and emerging Mexican segment of the North America market. Mexican-produced furniture in the medium term will replace some lower-priced Canadian imports from the U.S. and Asia. Mexican, uniquely styled, high-end, wood executive furniture will continue to have a limited impact in Canadian and international markets, taking into consideration that Mexico has had tariff-free access to the U.S. market for some time with little success. Nevertheless, the industry should target and pursue opportunities in the large and expanding Mexican systems furniture market, with products in the medium to high-price range. Competitiveness is achieved in this market through design and quality, rather than price, as the Canadian industry cannot compete with Mexican-produced low-cost products.

The furniture industry's recent experience in opening the Japanese market demonstrated that some opportunities do exist, in the medium term, for a very limited number of manufacturers of specialty furniture and high-end, executive wood and systems furniture. Expansion in the longer term is dependent on the cost of commercial space, product design-downsizing, evolving changes in the Japanese distribution system and the commercial environment.

China and other Southeast Asian countries have relatively unexploited markets relative to business and institutional furniture. In the short to medium term these markets are expected to offer only limited export opportunities for producers of ready-to-assemble furniture, because of the high cost of transportation, the lack of hard currency, the abundance of low-wage labour,

access to raw materials and the coming on stream of Asian producers using European and North American state-of-the-art technology.

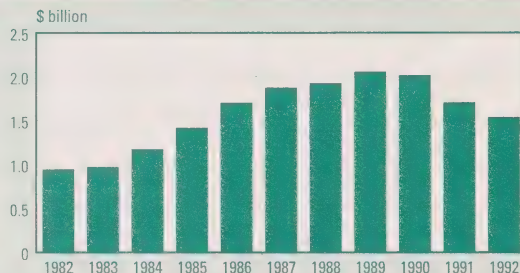
Canadian Position

Since the FTA came into force on January 1, 1989, it has been paralleled by reductions in construction starts for commercial, institutional and industrial building both in Canada and the U.S. Canadian imports of furniture, especially from the U.S., have shown a significant increase, and with the introduction of NAFTA on January 1, 1994, potential competitive pressures faced by Canadian manufacturers in their traditional markets are now expected to be greater than in the past few years. In the medium to long term, Asian countries such as Japan, Taiwan, the Republic of Korea and China that are developing efficient furniture manufacturing sectors for export to global markets, will add to this pressure. Asian imports represent some 10 percent of Canada's domestic market and provide strong competition, especially in metal desks, wood tables and to a lesser degree, metal filing systems.

In this sector, demand is driven by changes in non-production employment, corporate profits, commercial construction, investments in office automation equipment, the home/office phenomena and past postponements of replacement investments of business and institutional furniture.

In 1992, the Canadian industry shipped products worth \$1.5 billion (see Figure 1) and employed about 19 768 people. The portion of Canadian shipments destined for export was 41 percent, while 22 percent of the Canadian market was supplied by imports (see Figure 2). The U.S. is by far Canada's largest export market absorbing some 97 percent of Canadian business and institutional furniture exports. It is also the largest supplier of furniture imported into Canada, accounting for some 80 percent. Other

Figure 1 – Shipments



Source: Statistics Canada.

Figure 2 – Exports and Imports



Source: Statistics Canada.

main sources of imports are Europe and Asia. The business and institutional furniture sector is presently enjoying a positive trade balance of some \$367 million.

Canadian furniture manufacturing establishments are generally small to medium-sized with some 70 to 80 percent of shipments generated by the top 20 large firms (employing over 100 production workers) and it is estimated 90 percent of establishments are Canadian-owned. An increasing number of U.S. business and institutional furniture manufacturers have

Canadian subsidiaries that supply both the domestic and export markets. And a growing number of Canadian-owned firms have established production facilities in the U.S.

Production facilities are concentrated in Ontario and Quebec, with these two provinces accounting for approximately 90 percent of total shipments. There are also plants in Manitoba, Alberta and British Columbia.

Manufacturers of business and institutional furniture remain a dominant force in their domestic market and continue to achieve an increasing degree of success in the U.S. market. This success is attributable to a number of factors: a measure of cost-competitiveness with U.S. industry, flexible design specification, high-quality products, and skilled exploitation of medium and high-priced niche markets. Some firms are exploiting offshore markets, but the industry has not actively pursued overseas opportunities because the U.S. still offers the greatest scope for further expansion.

Implementation of the FTA has increased competition in the Canadian market. This increased competition, along with that from overseas producers, has required that Canadian manufacturers improve productivity and competitiveness through product specialization, development of new markets, the use of more efficient manufacturing methods and the undertaking of mergers and acquisitions. With the emergence of NAFTA and the completion of GATT negotiations, Canadian furniture manufacturers are now more exposed to international competition and will have to review their marketing practices seriously, and strive to increase their share of the global market.

The global marketplace is a reality and to take full advantage of the potential market opportunities, the industry must formulate new and innovative products and marketing strategies.

Strategic Direction

Continuing slow growth in the business and institutional furniture sector, and the challenge of global competition, are compelling the industry to maximize the domestic market and aggressively pursue exports. Government efforts will focus on providing the industry with intelligence that will help manufacturers to increase sales of furniture products with competitive advantage in high-growth markets, to capitalize on opportunities arising from the FTA and NAFTA, and to take advantage of prospective long-term opportunities in the Asia-Pacific region and Europe.

The furniture industry in cooperation with government will work to take advantage of market opportunities on a global scale by promoting and encouraging the following activities:

- comprehensive consultations with representatives of the industry to identify the most appropriate export strategies for specific markets, and to determine and set priorities for the industry's strategic intelligence requirements
- increasing levels of exports through:
 - targeted joint efforts to overcome barriers to the long-term competitiveness of the sector and concentrate on issues such as global product strategies, design, international standards (American National Standards Institute [ANSI]/ Business and Institutional Furniture Manufacturers Association [BIFMA]) and quality assurance including ISO 9000 standards
 - government, acting as primary facilitator in cooperation with industry, playing a crucial role in overcoming these barriers to competitiveness through programs sponsored by Industry Canada

- trade shows and missions utilizing available programs such as the Program for Export Market Development sponsored by DFAIT
- encouraging small and medium-sized companies to be ready for export to global markets by providing them with current statistical data, import trends and strategic market-entry information on viable foreign market opportunities
- promoting and encouraging partnering and international strategic alliances between the business and institutional furniture and other sectors that would conduct product-design R&D, exploit results and capitalize on innovations in product design through niche-market development by utilizing available programs.

Contact

Furniture, Household and Recreational
Products Directorate
Consumer Products Branch
Industry Canada
Tel.: (613) 954-3094
Fax: (613) 954-3107

Footwear

The footwear industry produces a large variety of products from leather, rubber and other synthetic materials but concentrates on leather dress boots and shoes for men and women, as well as winter and protective footwear.

International Environment

World trade in footwear totalled US\$31 billion in 1991, representing slightly more than 1 percent of total world exports in manufactured products. Developing countries accounted for 55 percent of all footwear exports.

The significant shift on a global scale of footwear manufacturing from developed to developing countries coincided with the general relaxation of international trade barriers and tariffs during the 1970s and 1980s. As is the case for most labour-intensive, low-value-added industries, conventional shoemaking is well suited to outward-looking economies with low labour costs such as Asia. The Republic of Korea, Hong Kong, China and Taiwan, as a trade block, have become the dominant supplier of relatively cheap footwear products to the European and the North American markets (see Figure 1).

The industry in all developed countries is undergoing significant restructuring. Producers have virtually conceded the cheaper end of both the domestic and foreign markets to Asian and low-cost suppliers. There is considerable consolidation taking place and orientation of manufacturing facilities to the production of premium products specifically tailored to niches in the world markets.

The development of new technologies spearheaded by the footwear machinery manufacturers and cooperative research institutes, such as the Shoe and Allied Trades Research Association (SATRA), are helping close the gap. This alone, however, will not fully eliminate the cost differences with low-labour-cost countries. Improvements are allowing manufacturers to compete in other areas, however.

Figure 1 — Key Players in World Markets, 1991



Source: Statistics Canada.

Canadian Position

The Canadian footwear industry comprises approximately 107 establishments with 10 000 employees. In 1992, the value of the apparent Canadian footwear market was \$1 467 million (see Figure 2). Total industry shipments that year were about \$685 million of which \$55 million were exported. Imports, valued at \$837 million, accounted for 57 percent of the apparent Canadian market. Severe competition from low-cost imports has reduced the industry's share of the domestic market from 62 percent in 1985 to less than 43 percent in 1992.

Over this same period, the export share of the total domestic shipments increased only slightly from 6.6 to 8 percent. The U.S. was the major destination for these exports, accounting for 82 percent in 1992 (see Figure 3). Other key markets include the EC and Japan.

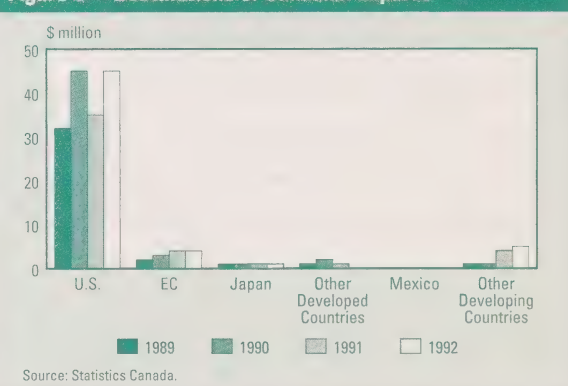
Canadian firms participating in major trade shows held in the U.S. and Canada are developing a solid reputation in specific product areas; namely, winter, utility and work boot subsectors. With products offering quality, style and good value, manufacturers are having some success in exploiting niche opportunities in the international markets. An increasing number of firms are investing in the most recent technologies (e.g. computer-aided design/computer-aided manufacturing [CAD/CAM], just-in-time [JIT] systems), and in improving product lines and installing the management structure needed to compete effectively in the U.S. and European markets.

With few exceptions, the firms are small to medium-sized, ideally set up to serve the diverse demands of the small domestic market. The flexible production systems that they have developed over the years can serve them well in capitalizing on the niche marketing opportunities in other countries. Export trade will be essential to this industry's future viability as there is little room for growth in Canada because of weak

Figure 2 — Apparent Canadian Market (ACM)



Figure 3 — Destinations of Canadian Exports



consumer demand, severe competition from low-cost imports and an inefficient retail sector.

Strategic Direction

Strong import competition resulting from the liberalization of world trade is forcing the industry to solidify its position domestically and actively pursue export opportunities stemming from the FTA and NAFTA, as well as other longer-term opportunities in the European and Asian markets.

In support of this initiative, the government will work closely with the industry on the following activities:

- promote the adoption of new technologies aimed at improving design, quality and productivity by encouraging membership in SATRA, a world-leading footwear research and product development centre (Industry Canada)
- support for technical missions to view the new technologies and foster strategic alliances between major Canadian and European footwear manufacturers (Industry Canada)
- improve export performance through:
 - participation in key U.S. trade shows in Las Vegas and regional shows in Michigan and Minnesota (DFAIT)
 - industry/government-run seminars and workshops on export practices and opportunities (DFAIT and Industry Canada)
- access to information on the footwear markets in Germany, France, the U.K. and Scandinavia (DFAIT)
- participation in a major European footwear show, i.e., the GDS Shoe Fair in Düsseldorf, Germany (DFAIT)
- develop a “benchmarking” project to compare the performance of Canadian corporate participants within their own industry, and with competitors in the U.S.

Contact

Textiles, Apparel and Footwear Directorate
 Consumer Products Branch
 Industry Canada
 Tel.: (613) 954-2921
 Fax: (613) 954-3107

Hardware and Housewares

The Canadian hardware and housewares industry manufactures a broad range of products such as cookware and small household appliances and other durables, locks and latch sets, cabinet and casket hardware fittings, hinges, and other builders' and shelving hardware. The industry also manufactures a variety of hand tools and implements such as augers, axes, chisels, edge tools, garden implements, hammers, handsaws, mechanics measuring tools, screwdrivers and wrenches.

International Environment

Global consumer expenditures on hardware and housewares products have been stagnant during the past few years. This has resulted in significant pent-up demand, particularly in the dominant U.S. market. Needless to say, these conditions have had a negative impact on the market for hardware and housewares products. This is especially true for the Canadian industry due to its heavy reliance on the U.S. market. There is reason to believe, however, that the situation will soon improve. For example, the baby-boom generation is now reaching its highest level of personal disposable income and demand for many household consumer products is already increasing. Moreover, as consumer confidence and the market for new homes improve, spending on household durables should rebound.

Canadian Position

Companies having 20 employees or less dominate Canada's hardware and housewares manufacturing sector, which employs approximately 22 000 people. Despite this fact, a small number of larger firms (40 percent of which are subsidiaries of U.S.-based multinationals) are responsible for most of the industry's sales, estimated in 1992 to have been \$4.5 billion.

Canada is a net importer of hardware and housewares products and has traditionally been dependent on the U.S. as its primary source. Recently, however, there has been a noticeable shift away from U.S. imports and toward offshore

markets, particularly Taiwan and the Far East. Steady growth in hardware exports from producers in the Asian countries (Singapore, Malaysia, Indonesia, Brunei, the Philippines) reflects the substantially lower material and labour costs enjoyed by these countries. In response to this shift, Canadian firms are specializing and carving out niche markets for their products. While it is no doubt difficult to match their Asian competitors strictly on a cost basis, Canadian firms increasingly see their competitive edge as being the quality and innovation of their products.

Some specific areas that seem to have a promising international outlook for Canadian durables include lawn and garden equipment, tableware, plastic housewares, small appliances, cookware, microwave ovens, the do-it-yourself markets, patio garden ornaments and tools. Innovative and environment-related niche products such as composters, also offer excellent opportunities for Canadian producers.

Niche market opportunities are also seen for do-it-yourself products in Japan, hand and power tools in Mexico, and small jacuzzis and drywall tools in Europe.

Increasing domestic competition is responsible for Canadian manufacturers seeking out foreign markets. Currently, the U.S. accounts for over 90 percent of the industry's exports; this is due in part to the FTA. NAFTA had opened up the Mexican market to competitive Canadian hardware and housewares products, which should prove beneficial to Canadian exports. For example, Mexican tariffs on household durables, currently in the range of 15 to 20 percent, will be

phased out over 10 years. This is particularly significant as the Mexican market for household durables is expected to continue to grow as the country's standard of living rises. Moreover, many Canadian companies view Mexico as a gateway to Latin America.

The European market has received increased attention from Canadian exporters over the past few years. Due to strong local competition, however, it is primarily the specialized niche markets that seem to offer the greatest potential for Canadian firms. Members of the CIS represent another important growth area, as does Poland, since its import of durables has doubled over the past two years.

Strategic Direction

Government in cooperation with industry will:

- continue to focus on the U.S. through niche marketing
- target international business development activities in Europe and Asia by increasing industry participation in trade shows and missions (DFAIT)
- enhance market intelligence gathering and dissemination activities, e.g., updating the *Directory of Canadian Exporters of Hardware and Housewares Products* (DFAIT)
- prepare and distribute to industry a report on international market opportunities identified by Canada's posts abroad (DFAIT)
- develop activities which aim to take advantage of opportunities arising out of the Access North America initiative (DFAIT)
- assist the development and enhancement of industry's delivery of export education and market intelligence, with particular focus on the Forum for International Trade Training (FITT) and targeting new exporters and small and medium-sized companies.

Contact

Sectoral Liaison Secretariat
Department of Foreign Affairs and
International Trade
Tel.: (613) 992-7722
Fax: (613) 943-8820

Household Furniture

The household furniture industry includes firms primarily manufacturing wooden household furniture, upholstered furniture and other household furniture.

International Environment

Based on 1993 estimates, the five largest furniture importing countries are the U.S., Japan, the U.K., the Netherlands and Canada.

NAFTA, which was implemented on January 1, 1994, should phase out tariffs on furniture over the next five to 10 years. Furniture manufacturers experienced a moderate growth in exports to Mexico over the past few years, due in part to trade reforms instituted in the late 1980s, which dismantled much of the country's intensely protectionist system of trade and tariff barriers. Furniture exports to Mexico are likely to grow in the coming decade due to the implementation of NAFTA.

Taiwan, the Philippines, Malaysia and Indonesia are among the Asian countries that are developing efficient furniture manufacturing industries for the purpose of exporting. It is also expected that China, with its abundant, low-wage labour force, may become a more active player on the international scene. These imports from Asia provide particularly strong competition in metal furniture, wood living room and outdoor furniture.

Although the market for furniture in Japan has been stagnant over the past few years, a wide range of Japanese trade promotion activities should help to stimulate further growth in furniture exports in the next several years. One such ambitious project is Osaka's new Asia and Pacific Trade Centre scheduled to open in the spring of 1994. This should give foreign (and Japanese) manufacturers a way to exhibit products and sell directly to Japanese retailers, thereby short-cutting the complex Japanese distribution system.

Furniture products imported from Europe tend to feature unique modern or contemporary

designs in higher-price ranges that appeal to smaller market segments. A lot of these high-end quality products are shipped unassembled.

With tariff elimination on furniture products as part of the GATT exercise, it is expected that over the next five to 10 years, competition will increase from Southeast Asian countries, mainly China, Malaysia, Indonesia and the Philippines. Armed with modern technology, these countries with their low wages, abundant populations and access to raw materials, could then produce any type of product from the low to high-end categories.

In the past, labour rates, access to raw materials, tariff rates and transportation costs were critical to the competitiveness of furniture products in the marketplace. In the future, comparative advantage will be based more upon marketing genius, integration and design. It will be more important than ever before to produce high-value products at the lowest cost.

Canadian Position

In 1991, the Canadian household furniture industry (excluding the bedding industry) consisted of approximately 782 establishments with shipments worth \$1.5 billion. The industry employed about 21 000 people. Exports accounted for about 25 percent of Canadian household furniture shipments, while 38 percent of the domestic market was supplied by imported furniture. The U.S., by far Canada's largest export market, received about 96 percent of all furniture exports in 1991. It is also the largest supplier of furniture imported into Canada, accounting for around 55 percent of total Canadian household furniture imports in 1991.

Most Canadian furniture manufacturers are small to medium-sized firms. The majority are Canadian-owned and a few operate production facilities in the U.S. Some Canadian household furniture manufacturers have demonstrated the capacity to be competitive in continental and international markets. Most of these are niche players, with a special talent for marketing unique products.

The market served by the furniture industry is heterogeneous, with a wide variety of consumer preference in style, design, uniqueness, quality and price. However, across all products, there are recognized categories of low, medium and high-priced furniture. Given substantial tariff protection in the past, Canadian manufacturers were able to maintain a dominant position in the domestic market by producing a wide variety of designs and styles in all price ranges.

The FTA has significantly increased competition from U.S. manufacturers in the Canadian market. This trend, coupled with competition from overseas suppliers, requires that Canadian manufacturers continue to improve their productivity and competitiveness by implementing more efficient manufacturing methods, focusing on product specialization, developing new markets and undertaking mergers or acquisitions.

Mexico's emergence as an important participant in the North American market will increase competition faced by the Canadian industry in both domestic and main exports markets. Low-end Mexican-made furniture will replace some low-end imports from the U.S. and Asia. Unique Mexican styles will also sell in Canada. Canadian manufacturers should investigate the possibilities of penetrating this huge Mexican market, mainly in the quality high-end furniture products (case goods, upholstery products) where they would not compete with low-cost production items.

The opening of the Japanese market may offer some opportunities for a limited number of Canadian specialty furniture manufacturers. More research needs to be done in order to identify the possibilities offered by this huge market. The differences in style, culture, language, distribution systems and marketing are factors that need to be looked at in more depth in order to take advantage of the market. Canadian manufacturers will need to make the necessary adjustments in design and sizing, required for the Japanese and Asian markets.

To meet future competition, Canadian manufacturers will have to pursue the productivity gains available through the use of new technologies and advanced manufacturing systems. The increased use of new technologies, together with more emphasis on the development of export markets, is likely to allow medium-sized firms to offer a narrower product line to a broader market base. Design and market research will be very important to success on international markets. Specialization (niche marketing) will be the key to survival for much of the Canadian industry.

Selling price, customization, quality, design and short delivery times will give Canadian producers these advantages.

Because of transportation costs, the growth in the popularity of ready-to-assemble furniture is expected to continue and new products will be introduced to accommodate the home office and the home entertainment centre which are becoming more popular. Recently, increased attention has been given to designing products that satisfy the needs of both the aging and disabled populations. Juvenile furniture is also a segment that is growing.

Strategic Direction

To maximize opportunities for the household furniture industry, government efforts will focus on:

- providing the industry with intelligence that will help manufacturers to capitalize on opportunities arising from the FTA and NAFTA, and to take advantage of prospective long-term opportunities in the Asia-Pacific region and European markets
- assisting small to medium-sized firms in expanding in the U.S. and Mexico through government/association-led seminars and workshops to prepare Canadian firms to enter markets on an informed basis (Industry Canada, DFAIT, Posts, Associations)
- assisting proven exporters who have the skills and resources to develop and undertake long-term marketing plans (Industry Canada, DFAIT)
- supporting market development activities through participation in trade shows and more targeted missions based on sound research and planning (Industry Canada and DFAIT)
- assisting companies in establishing joint ventures, in prospecting new opportunities and technology transfers
- providing strategic and updated information on foreign markets, mainly in terms of statistics, specific products in targeted geographic markets, fairs, market trends and technology (Industry Canada, DFAIT, Posts)
- increasing exporter compliance with foreign standards through monitoring of relevant foreign governments' policies and initiatives, and participation in international fora as advocate for the development of international standards, testing and certification. (ISO 9000)

Contact

Furniture, Household and Recreational
Products Directorate
Consumer Products Branch
Industry Canada
Tel.: (613) 954-3105
Fax: (613) 954-3107

Sporting Goods (including recreational watercraft)

The sporting goods industry includes firms primarily engaged in manufacturing a broad range of consumer goods for individual and group recreational and fitness activities.¹

International Environment

The world market for sporting goods is estimated in excess of \$55 billion with recreational watercraft/marine accessories representing another \$20 billion. The international market is highly fragmented and observers estimate that the top 10 companies control less than 20 percent of the total market. Although exact worldwide market figures are unavailable, industry estimates place the U.S. at 30 percent of the sporting goods market, the EC at about 33 percent, Japan at 22 percent, Canada at 3 percent and the rest of the world at about 12 percent. In recreational watercraft, the U.S. accounts for about 50 percent of the market, the EC 25 percent, Japan 10 percent, Canada 2 percent, and the rest of the world 13 percent (see Figure 1).

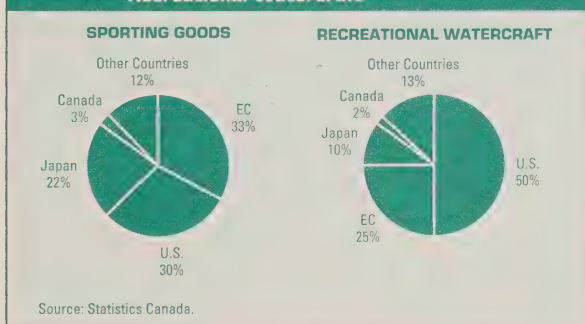
Worldwide, the sporting goods market is heavily export-dependent. In addition, there exists a high degree of country-specific product identification and manufacturing specialization. Generally, lower-cost products are produced by Far East low-wage countries, while developed countries (including Taiwan) provide the higher-value-added items.

During the late 1980s, there was extensive rationalization and such well-known companies as Wilson, Nordica, Puma, Adidas, Head Prince, Cooper, etc., changed ownership or were taken over. In the boating segment, Outboard Marine Corporation, Brunswick Corporation and Genmar Industries Inc. undertook major restructuring programs.

Brand names continue to dominate in the sale of medium to high-end products. With the notable exception of Alpine ski manufacturing, suppliers tend to source products from countries or regions where the transaction will be to their overall benefit.

Taiwan continues to be the leading exporter of sports equipment, accounting for over 20 percent of world exports, while the U.S. dominates in recreational watercraft. Recent players emerging as significant exporters include China (particularly in bicycles) and low-wage areas in the Far East (Indonesia, Philippines, Malaysia, etc.). In several cases, the emergence of these countries as exporters is the result of existing production facilities being transferred from higher-cost locations, such as Taiwan, the Republic of Korea and Hong Kong.

Figure 1 — World Markets for Sporting Goods and Recreational Watercraft



¹ Excluded are firms primarily engaged in camping equipment, sporting arms and ammunition, sport tape, skate sharpeners, athletic footwear and jerseys.

While technological and innovation development is widely dispersed, it is the country or region usually associated with a particular product specialty that is often in the forefront of design and innovation. The sporting goods industry is second only to the defence/military sector in the use of composites and advanced materials. With many developed countries reducing spending on military and defence, companies engaged in the development and supply of advanced materials are looking more intently at this sector to expand use of these materials. It is expected that the use of composites, already extensively adapted to racquet and golf equipment, will become more widespread throughout the industry.

Several key emerging consumer trends in North America and western Europe will influence the market, in particular:

- the continuing emphasis on personal fitness and family or group recreational activities, which is expected to sustain these activities' growth and popularity, at the expense of competitive individual and team sports
- increased female participation, helping to expand overall participation in many recreational and sporting activities and to popularize newer ones, with a resulting increased demand for both new and existing equipment.

Key emerging markets that will affect the industry in the next few years are primarily NAFTA, the developing economies of eastern Europe and a more closely integrated EC. The various scenarios that were developed for the GATT make any assessment difficult at this time, although it is not expected to result in any significant change to the industry.

Two new, potentially major competitors that have appeared on the global sporting goods scene are Russia and China. Canadian industry is encountering pressure from Russia's hockey stick production, while China has become a major supplier of bicycles to most of the developed economies, including Canada.

For the next decade

- Internationally, all indications are for a bright outlook for sporting goods, including recreational watercraft, although sales may not achieve the 8 to 10-percent annual growth of the 1980s. The rise in many countries' income levels and an increasing interest in pursuing leisure-time activities while maintaining an active and healthy lifestyle, will reinforce this growth.
- Sourcing opportunities will expand as more countries become skilled in the use of composites and advanced materials. These will continue to supplant more traditional materials and gain ready acceptance among consumers.
- The more successful firms will be marketers rather than just manufacturing operations, with control over the brand name, distribution, service and manufactured quality of products.
- The industry will be required to reduce product development lead-time, while there will be pressure from major retailers to shorten the product buying cycle.
- Significant growth is expected in individual outdoor-oriented activities and slower growth in team and indoor activities. Some segments targeted as growth areas over the next decade are products associated with cycling, soccer, exercise walking, basketball, in-line skating, volleyball, exercise equipment and personal watercraft.

Canadian Position

The Canadian sporting goods industry in 1992 comprised about 300 establishments and employed roughly 12 000 people. It has annual shipments of about \$1.2 billion (\$750 million sporting goods plus \$400 million boats/marine accessories) of which \$452 million (38 percent) is exported. Imports are \$927 million and account for 51 percent of the apparent Canadian market.

Many companies in the industry are Canadian-owned. They range in size and scope from numerous relatively small operations serving niche markets, and usually manufacturing a narrow brand of products, to large, globally competitive companies with the resources and the management expertise to compete internationally against well-known brand names. Canadian companies generally have a reputation for high-quality, well-engineered and well-designed products and are strong international performers in certain segments of world markets.

While smaller Canadian companies have established a name and reputation in such diverse niche markets as sport whistles, above-ground pools, outdoor-sports products and swim goggles to name only a few, Canadian industry is recognized worldwide more for its strength in the skating and hockey equipment, cycling, exercise equipment and personal watercraft segments (see Figure 2). Canada's presence in these segments is dominated by one or more large, sophisticated, internationally competitive manufacturers that have been in the forefront of opening new markets. In many cases, smaller companies have been able

to take advantage of their efforts by exporting complementary and accessory products.

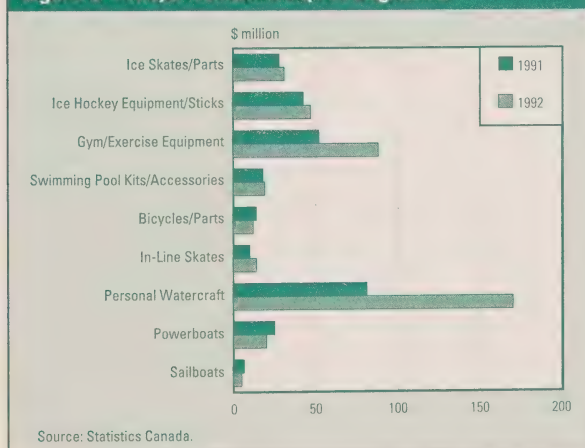
International trade is a key ingredient to maintaining this industry's viability. In recent years, the export performance of firms in the industry has surpassed domestic growth, and now represents almost 40 percent of industry shipments. While exports to Europe continue to grow, the major increases have been in the U.S. Over 85 percent of exports now go to the U.S., in particular recreational watercraft (90 percent), exercise equipment (93 percent) and in-line skates (98 percent).

Exports to the U.S. are generally expected to continue to grow significantly for the next several years, with the industry similarly increasing its percentage of U.S. exports. This U.S. growth is fuelled by the growing North American popularity of certain segments in which Canadian firms are major players — personal watercraft, in-line skates, exercise equipment and the complementary growth in products and accessories associated with the marine industry and roller and ball hockey. With leading manufacturers in all these categories, Canadian industry is taking advantage of this surge in popularity. Since Europe and Japan have been slower to accept these latest North American trends, Canadian exports to these areas are proceeding at a slower rate.

However, it is expected that the recent geopolitical changes in Europe will have a definite effect on the Canadian industry. The development of market economies in eastern Europe is expected to create additional opportunities for skating and exercise equipment products, which are already popular in these countries.

Since western Europe continues to be a significant market for the industry, major exporters are preparing for the closer economic integration of Europe in several ways. More companies are establishing wholly owned subsidiaries in the EC, while others are either aligning with Community-wide wholesalers or developing licensing arrangements. Medium-sized and smaller companies with

Figure 2 — Major Canadian Export Segments



export potential are showing increased interest in identifying contacts to optimize opportunities that will arise when the European economies are fully integrated. While the potential impact of the just completed GATT round is difficult to assess, the industry generally sees increased possibilities in Europe and other developed areas but has expressed great concern about competition from such Far East countries as Taiwan, the Republic of Korea, Malaysia, China and the Philippines.

Canada is in a good position to take advantage of emerging popularity trends in in-line skating/hockey, personal watercraft and outdoor activities. It should continue to maintain a dominant presence in the ice skating and hockey equipment sectors with a lesser, though still competitive position in cycling, exercise equipment and recreational boats.

Strategic Direction

To maximize opportunities for the sporting goods industry, the government, in concert with the industry, will promote and encourage the following initiatives and activities:

- provide the industry with intelligence that will help manufacturers to increase sales of goods with competitive advantages in high-growth and niche markets so as to capitalize on opportunities arising from the FTA and NAFTA and to take advantage of opportunities in the European and Asia-Pacific region markets (Industry Canada, DFAIT, Posts)
- assist small and medium-sized firms to become export-ready and better prepared to compete in international markets through government and association-led seminars, workshops, and NEXOS (New Exporters to Overseas Markets) missions aimed at raising export awareness, highlighting best practices and cultivating new management attitudes (Industry Canada, DFAIT, Associations)

- continue to focus market development activities, such as Canadian stands at major shows and incoming missions, on a few selective, internationally recognized, general sporting goods events while pursuing opportunities for specific specialty and niche markets in the U.S., Europe and Japan, e.g., pools and spas, recreational watercraft, outdoor products, cycling equipment and accessories (DFAIT, Posts, Industry Canada, Associations)
- provide strategic market intelligence, especially in terms of industry statistics, technology, market and product trends (Industry Canada, NRC, Posts)
- encourage import substitution and access to new technology through the promotion of strategic alliances and joint ventures both within and outside of Canada (Trade commissioner networks and research organizations, such as NRC and universities, will be important sources of information and technical assistance)
- work with the relevant associations to be constantly aware of their members' objectives and interests, and design a marketing plan that can either be implemented directly, or recommended for implementation to the appropriate government department. (Associations, Industry Canada, DFAIT)

Contact

Furniture, Household and Recreational
Products Directorate
Consumer Products Branch
Industry Canada
Tel.: (613) 954-3109
Fax: (613) 954-3107

Textiles

The highly diversified textile industry includes producers of synthetic fibres, yarns and fabrics, and of a variety of textile products such as household linens and carpets.

International Environment

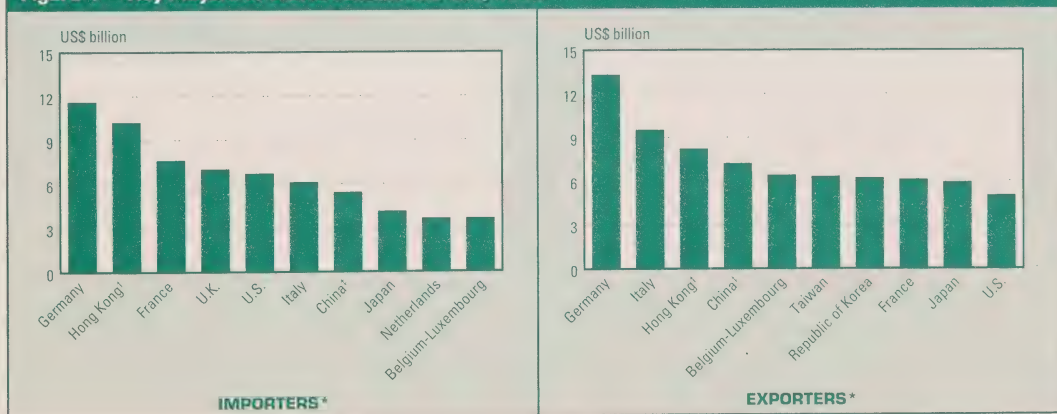
International trade in textiles represents about 5 percent of world exports in manufactured products overall. In 1989, the textiles trade reached US\$97 billion, of which 46 percent occurred between developed countries and some 21 percent occurred between developing and developed countries (see Figure 1).

While developed countries continue to dominate the textile sector, developing countries, with easy access to new manufacturing technologies, are increasing their share of world textile production. In addition, emerging regional trade blocs and new trade powers such as China (currently undergoing phenomenal expansion in textile manufacturing) will strongly influence global trade patterns and industry structure. Changing swiftly to become internationally

competitive in a rapidly evolving and more dynamic trading environment, textile producers are investing in continuous productivity improvements, product and market specialization, and establishing a regional presence in a growing number of selected markets.

Over the next decade, world textile consumption is projected to grow by only 1.5 percent annually. Much of this growth is expected to come from maturing markets in developing countries that succeed in increasing their own purchasing power, rather than from mature markets in developed countries. Growth in demand for certain textiles will exceed the average rate. For example, many global competitors are entering the race to capitalize on emerging opportunities for highly engineered technical textiles for which demand is expected to grow by 10 to 15 percent annually.

Figure 1 — Key Players in World Textiles Market, 1990



[†] Includes significant re-exports and imports for re-export.

[‡] Includes trade through processing zones.

* Canada is the 12th-leading importer of textiles valued at \$2.3 billion in 1990. Canada is NOT among the 15 leading exporters.

Canadian Position

The Canadian textiles industry employed 60 000 persons in 1991 and had total shipments of \$5.7 billion, comprising \$4.6 billion in domestic shipments and \$1.1 billion in exports (see Figure 2). Imports accounted for 40 percent of the \$7.7 billion apparent Canadian market.

The industry's exports have grown considerably, increasing their share of all shipments from 10 to almost 24 percent between 1985 and 1993. The U.S. is the largest destination for textile exports, accounting for 74 percent in 1993. Other key destinations include the EC, Asia-Pacific countries and South America (see Figure 3).

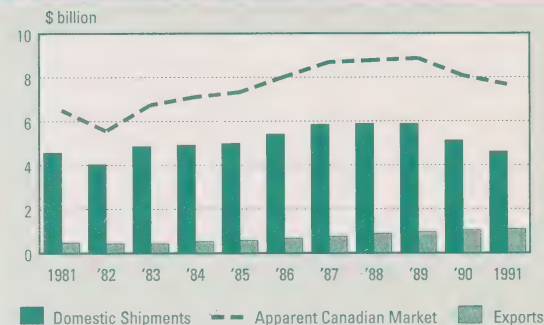
The industry's substantial, continuing capital investment has produced a dynamic, modern, efficient and environmentally astute textile manufacturing sector. Its productivity improvements over the past decade have outpaced those of Canadian manufacturing overall.

Boasting excellence in quality, design and service, Canadian firms are developing new export markets for an increasing variety of textiles. Some producers are very capital-intensive, and can take advantage of economies of scale to attain price leadership in certain products with large world markets. Others are small to medium-sized companies with competitive strengths in small-run production derived from servicing the many diverse demands of a relatively small domestic market. Many are adopting and creatively adapting technological advances to develop new specialty yarns and fabric constructions, as well as unique higher-value-added, high-performance textiles which are in growing demand in specialized market niches worldwide.

Strategic Direction

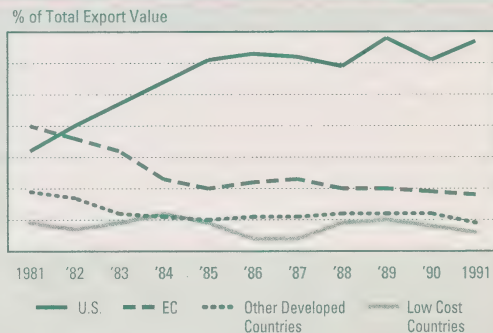
Slow growth in textile consumption and the liberalization of world trade are compelling the textile industry to strengthen its domestic base and to pursue exports aggressively. Government

Figure 2 — Shipments and Exports



Source: Statistics Canada, Industry Canada.

Figure 3 — Destinations of Canadian Exports



Source: Statistics Canada, Industry Canada.

efforts will focus on providing the industry with intelligence that will help manufacturers to increase sales of textiles with competitive advantages in high-growth markets; to capitalize on opportunities arising from the FTA and NAFTA and; to take advantage of prospective long-term opportunities in the Asia-Pacific region, European and South American markets.

Specifically, the government, in consultation and cooperation with the industry, will undertake to:

- fuel exporting activities by
 - encouraging manufacturers to participate in government and industry-led seminars

- and workshops aimed at raising export awareness, highlighting "success stories" and cultivating new management attitudes
- offering learning modules for new exporters
- promoting industry participation in pertinent trade shows and missions utilizing available programs such as the DFAIT-sponsored Program for Export Market Development
- explore and facilitate partnering and international strategic alliances between Canadian and foreign textile producers or other sectors that could jointly conduct R&D, exploit results, and capitalize on innovations in product development and textile applications; trade commissioner networks, among others, will be important sources of information
- enhance public awareness of Canadian competitive strengths in production flexibilities, product quality and quick response, through various media, particularly in the North American market; this objective will be pursued jointly by Industry Canada and DFAIT
- heighten awareness of, and facilitate exporters' compliance to foreign standards by:
 - monitoring relevant government policies and initiatives
 - participating in international fora as advocate for the development of international standards, testing and certification

Industry Canada, in consultation with other government organizations such as DFAIT, the Standards Council of Canada, and the Canadian General Standards Board, will assume a primary role in this effort.

Contact

Textiles, Apparel and Footwear Directorate
Consumer Products Branch
Industry Canada
Tel.: (613) 954-2883
Fax: (613) 954-3107

Consumer Products

Activity	Date	Location	Dept.	Contact
Asia Pacific South				
Leisure Products Mission to New Zealand	Jun 1994	New Zealand*	DFAIT	(613) 995-7662
Incoming Hardware Buyers Mission to National Hardware Show	Aug 1994	Toronto, Ontario	DFAIT	(613) 995-7662
Catalogue Show	Oct 1994	Auckland, New Zealand	DFAIT	(613) 995-7662
East Asia				
International Leather Goods Show	Apr 1994	Taipei, Taiwan	DFAIT	(613) 996-8705
Fashion Buyers Individual Visits or Mission to Canada	Oct 1994	Hong Kong	DFAIT	(613) 995-6662
Japan				
Furniture Buyers Mission to Canada (Fukuoka)	TBD*	Canada*	DFAIT	(613) 996-2460
Solo Canadian Lifestyles Products Show	Jun 1994	Japan*	DFAIT	(613) 996-2460
Superkid '94	Jul 1994	Tokyo, Japan	Industry Canada	(613) 954-3109
Nagoya Import Fair	Oct 1994	Japan*	DFAIT	(613) 996-2460
Recreational Vehicle Solo Show	Oct 1994	TBD*	DFAIT	(613) 995-1678
IIDEX (Incoming Mission)	Nov 1994	Japan*	DFAIT	(613) 996-2460
Tokyo International Furniture Fair	Dec 1994	Tokyo, Japan	DFAIT	(613) 996-3774
Tokyo Gift Show	Feb 1995	Tokyo, Japan	DFAIT	(613) 996-2458
West Japan Total Living Show	Mar 1995	Osaka, Japan	DFAIT	(613) 996-2460
Latin America and the Caribbean				
Hardware Buyers	Oct 1994	Caribbean*	DFAIT	(613) 943-8807
El Salvador International Fair	Nov 1994	El Salvador*	DFAIT	(613) 996-5358
Havana International Fair '94	Nov 1994	Havana, Cuba	DFAIT	(613) 996-6129
IIDEX '94	Nov 1994	Toronto, Ontario Mexico City, Mexico	Industry Canada	(613) 954-3094
Canada Expo '95	Jan 1995	Monterrey, Mexico	DFAIT	(613) 996-5358
Expocomer '95	Mar 1995	Panama*	DFAIT	(613) 996-5358
Multiple Markets				
Consumer Electronics Show — Jan.'95	Jan 1995	Las Vegas, Nevada	Industry Canada	(613) 954-2868
Canadian Sporting Goods Association Annual Trade Show	Feb 1995	Montreal, Quebec	Industry Canada	(613) 954-3109

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
United States				
Apparel Representative Locator	Apr 1994	Chicago, Illinois	DFAIT	(613) 944-9476
Kitchen and Bath Show	Apr 1994	Chicago, Illinois	DFAIT	(613) 944-7486
New York Fashion Creators (N.Y.F.C.)	Apr 1994	Los Angeles, California	DFAIT	(613) 944-9476
Contract Canada, Solo Office Furniture Show	May 1994	Washington, D.C.	DFAIT	(613) 944-9479
Incoming Mission of Home Depot Buyers	May 1994	Toronto, Ontario	DFAIT	(613) 944-7486
SIDIM (Canadian Business and Institutional Furniture Show)	May 1994	Canada* U.S.*	DFAIT	(613) 944-9479
Chicago Gift Show	Jun 1994	Chicago, Illinois	DFAIT	(613) 944-9479
Native Arts Promotion	Jun 1994	Minneapolis, Minnesota Washington, D.C. Northwest Territories*	DFAIT	(613) 944-9479
Seminars Giftware and Crafts	Jun 1994	Canada*	DFAIT	(613) 944-9479
Solo Rep Locator (Giftware)	Jun 1994	Minneapolis, Minnesota	DFAIT	(613) 944-9479
Office and Contract Furniture — National Exhibit at "Neon '94"	Jun 1994	Chicago, Illinois	DFAIT	(613) 944-9479
Charlotte Craft Show (Summer)	Jul 1994	Charlotte, North Carolina	DFAIT	(613) 944-9479
DesignFest '94	Jul 1994	Orlando, Florida	DFAIT	(613) 944-9479
National Sporting Goods Association (NSGA)	Jul 1994	Chicago, Illinois	DFAIT	(613) 944-6134
Eurostyle	Aug 1994	New York*	DFAIT	(613) 944-9476
Incoming Buyers Mission to Market Showplace '94	Aug 1994	Calgary, Alberta	Industry Canada	(613) 954-3105
Midwest Men's Wear Collective	Aug 1994	Chicago, Illinois	DFAIT	(613) 944-9476
National Hardware & Building Products Show	Aug 1994	Chicago, Illinois	DFAIT	(613) 944-7486
Outdoor Retailer Expo West	Aug 1994	Reno, Nevada	DFAIT	(613) 944-9476
Western Shoe Associates	Aug 1994	Las Vegas, Nevada	DFAIT	(613) 944-9476
National Hardware Show/National Building Products Exposition & Conference	Aug 1994	Chicago, Illinois	DFAIT	(613) 944-7486
Canada Mode	Sep 1994	New York*	DFAIT	(613) 944-9476
Solo Rep Locator	Sep 1994	Denver, Colorado	DFAIT	(613) 944-9479
Interbike International Bike Show	Sep 1994	Anaheim, California	DFAIT	(613) 944-6134

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
International Marine Technology Exhibition & Conference Show (IMTEC)	Oct 1994	Chicago, Illinois	DFAIT	(613) 944-6134
Remodelers Show	Oct 1994	Atlanta, Georgia	DFAIT	(613) 944-7486
Incoming Buyers to IIDEX	Nov 1994	Toronto, Ontario	DFAIT	(613) 944-9479
National Spa and Pool Institute '95	Nov 1994	New Orleans, Louisiana	DFAIT	(613) 944-6134
Apparel Representatives Locator	Jan 1995	New York* Minneapolis, Minnesota Detroit, Michigan Buffalo, New York	DFAIT	(613) 944-9476
Apparel Representatives Locator (Children's)	Jan 1995	New York*	DFAIT	(613) 944-9476
Canadian Hardware Show	Jan 1995	Vancouver, B.C.	DFAIT	(613) 944-7486
Footwear Market Week	Jan 1995	Minneapolis, Minnesota Detroit, Michigan	DFAIT	(613) 944-9476
Incoming Buyers to Canada's Home Furnishings Market	Jan 1995	Toronto, Ontario	DFAIT	(613) 944-9479
Washington Gift Show	Jan 1995	Washington, D.C.	DFAIT	(613) 944-9479
West N.Y. Gift Show (Winter)	Jan 1995	Rochester, New York	DFAIT	(613) 944-9479
Incoming Buyers Mission, Toronto International Boat Show	Jan 1995	Toronto, Ontario	Industry Canada	(613) 954-3760
Buyers Mission to Atlantic Crafts Show	Feb 1995	Halifax, Nova Scotia	DFAIT	(613) 944-9479
International Miami Boat & Sail Boat Show '95	Feb 1995	Miami, Florida	DFAIT	(613) 944-6134
Sail Expo '95	Feb 1995	Atlantic City, New Jersey	DFAIT	(613) 944-6134
Solo Rep Locator (Giftware)	Feb 1995	Detroit, Michigan	DFAIT	(613) 944-9479
Footwear Market Week	Mar 1995	Portland, Oregon Boston, Massachusetts	DFAIT	(613) 944-9476
Health Care Design Forum (Furniture)	Mar 1995	Minneapolis, Minnesota	DFAIT	(613) 944-9479
Solo Rep Locator (Giftware)	Mar 1995	Boston, Massachusetts	DFAIT	(613) 944-9479

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
Western Europe and European Community				
Footwear Technical Mission to U.K.	Apr 1994	Kettering, England Primasens, Germany	Industry Canada	(613) 954-2921
International Trade Fair for Sports Equipment and Fashion (ISPO) (Fall)	Aug 1994	Munich, Germany	CSGA	(514) 393-1132
New Exporters to Overseas Markets (NEXOS) Mission to FIDEC (International Sporting Goods Fair) and SISEL 1994	Sep 1994	Madrid, Spain Paris, France	DFAIT	(613) 996-7544
IFMA (Bicycle)	Oct 1994	Cologne, Germany	DFAIT	(613) 996-2147
Amsterdam Marine Equipment Trade Show (METS '94)	Nov 1994	Amsterdam, The Netherlands	DFAIT	(613) 992-7001
Incoming Fur Mission	Jan 1995	Montreal, Quebec Toronto, Ontario	DFAIT	(613) 996-1530
Toronto International Boat Show — Incoming Buyers	Jan 1995	Toronto, Ontario	Industry Canada	(613) 954-3760
Incoming Buyers Mission to CSGA Show	Feb 1995	Montreal, Quebec	DFAIT	(613) 996-2147
Incoming Buyers to CDN Hardware Show	Feb 1995	Toronto, Ontario	DFAIT	(613) 996-1530
ISPO Spring '94; International Sports Articles Show	Feb 1995	Munich, Germany	CSGA	(514) 393-1132
NEXOS Mission to ISPO and Scandinavia	Feb 1995	Munich, Germany	DFAIT	(613) 996-3774
International Hardware Show (w/Group)	Mar 1995	Cologne, Germany	DFAIT	(613) 996-1530

* Exact dates and/or cities to be determined.

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Canada's International Trade Business Plan is made up of three key components: a Strategic Overview, a series of industry sector strategies, and an accompanying series of international activities lists. Industry sectors available include:

1. Advanced Manufacturing Technologies
2. Aeronautics
3. Agri-Food Products
4. Arts and Cultural Industries
5. Automotive
6. Biotechnologies
7. Business and Professional Services
8. Chemicals and Plastics
 - Chemicals and Petrochemicals
 - Plastics and Polymer Products
9. Consumer Products
 - Apparel Industry
 - Business and Institutional Furniture
 - Footwear
 - Hardware and Housewares
 - Household Furniture
 - Sporting Goods (including recreational watercraft)
 - Textiles
10. Defence and Related Products
 - Aviation, Marine and Defence Electronics
 - Marine and Land Defence Systems
11. Electrical and Energy Equipment
 - Electrical Equipment
 - Oil and Gas Field Equipment
12. Environmental Industries
13. Fish and Seafood Products
14. Forest Industries
15. Industrial Technologies
 - Agricultural Technology, Machinery and Equipment
 - Mining — Forestry — Pulp and Paper
 - Ocean and Marine Shipboard Technology
16. Information Technologies
17. Medical and Health-care Products
18. Minerals, Metals, Advanced Materials and Construction Products
19. Space
20. Tourism
21. Urban Transit and Rail

For information on how to receive the Strategic Overview, or additional industry sector strategies and international activities lists, please call: **1-800-267-8376**



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Canada's International Trade Business Plan

1994-1995

*An Integrated Plan for Trade, Investment
and Technology Development*



Doing Business Abroad



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Aussi disponible en français sous le titre Matériel de défense.



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Aviation, Marine and Defence Electronics	1
Marine and Land Defence Systems	5

Aviation, Marine and Defence Electronics

The following electronics products, systems, subsystems and engineering services are specifically designed and supplied to commercial marine, aviation and defence (including paramilitary) markets: navigation and avionics; communications; power conditioning; air traffic control (ATC); vessel traffic management; integrated control systems; specialty defence markets, such as electronics warfare, antisubmarine warfare (ASW), fire control, mine countermeasures, and mission display and systems; and, simulation and training devices/aids for the above products and markets. (General security and defence products are described in the reports on Marine and Land Defence Systems, and Space.)

International Environment

The major players in the international defence market are the U.S., the countries of the former U.S.S.R., France, Germany, China and the U.K. While the U.S. has always been a significant player, its declining domestic defence budget has forced U.S. companies to compete more vigorously in the international market, supported by their government. As a result, the U.S. has increased its share of the market to more than 40 percent from 30 percent four years ago. Canada's share of the market is about 1 percent.

The end of the cold war precipitated significant defence budget cuts in major traditional markets in North America and the North Atlantic Treaty Organization (NATO). Governments looked for a "peace dividend." As the major powers' preoccupation with the possibility of a nuclear confrontation and a major armed conflict between the super powers waned, regional conflicts assumed greater importance. These conflicts required a changing emphasis in the armed forces' make-up which will continue through the turn of the century. A considerably larger part of the declining forces will be required to deal with preventing, containing or policing regional conflicts that have been simmering for many years, and that are now surfacing as the former U.S.S.R.'s influence has declined both nationally and internationally.

Not wishing to lose its edge in military technology or its key defence industrial base, the

U.S. has chosen to keep its R&D budget constant, reduce its forces selectively to between 60 and 75 percent of the 1990 level and build on its military surveillance strengths exhibited in the Gulf war. However, it has not yet completely resolved what kind of make-up the forces will have to cope with the new "orders of battle." In the Gulf war, for example, the Western Allies demonstrated a decided deficiency in heavy-lift capability, both sea and air.

Caught in the squeeze is the U.S. Department of Defense capital procurement budget. Several major programs have been terminated or severely cut back. R&D is being completed and shelved if not needed for the immediate requirements of the armed forces' evolving role. Particularly hard hit will be the ASW market, a Canadian strength. Canadian access to other market segments in the U.S. will meet tough competition as U.S. industry will want these previously Canadian market niches for themselves. On the other hand, companies that provided advanced systems and equipment for the Canadian Patrol Frigates and the mid-life update (the Tribal Class Update and Modernization Project [TRUMP]) of the DDH destroyers, such as power conditioning, communications, command-and-control systems and subsystems (machinery, anti-air warfare [AAW] communications) have been stimulated in this market and others by the ships' performance.

Compounding the impact of the defence budget cuts on Canadian industry, the worldwide recession has severely affected world travel and

shipping, forcing the airlines and shipping industries to reduce capital expenditures in marine and aviation electronics and full-flight simulators. However, other simulation and training device markets continue to grow, particularly those that provide significant savings in training costs on real hardware at modest capital cost. The former markets are showing signs of recovery in some regions, but no strong worldwide trend is evident.

Characteristics of the international environment are:

- rapidly advancing technologies and fierce competition
- continuously declining defence budgets compounded by a shift in the make-up of forces in major markets (the U.S., Europe and other NATO countries)
- emerging markets for traditional weapons systems in both traditional markets, the Middle East and the Pacific Rim
- the market flooded by very low-priced surplus equipment from former Warsaw Pact countries
- resulting stiffer competition for remaining business, coupled with declining defence budgets offset by rising electronics components in new military hardware and in the upgrade of older equipment so that overall market for defence electronics remains flat or slightly increasing
- increased emphasis on application of associated civil, and development of dual-use, technologies
- civil markets in aviation and marine systems still suffering from recession, although simulation and training device markets continue to grow
- a growing ATC market due to the more open access in eastern Europe and Asia and the need to update old equipment to meet modern standards
- growing importance of access in these markets, largely controlled by government

and government-influenced bodies; despite protestations to the contrary, the proportion of these markets truly open to international competition will likely decline as countries reserve domestic opportunities for domestic suppliers

- as a result of liberalized trade, generally open, competitive access to most marine, avionics, simulator and ATC markets not controlled by governments
- in Europe, extremely difficult access without a teaming arrangement with a domestic partner.

Canadian Position

Strengths

The Canadian defence and defence-related (avionics, ATC, simulation, marine electronics, etc.) electronics companies had 1992 sales in the order of \$2 billion, exporting approximately 60 to 65 percent of their production. These revenues are down 15 percent from the peak in 1989. Again, 60 to 65 percent of the sales are defence; the balance are to the related civil markets.

The top 15 firms are the following: CAE Electronics; Canadian Marconi; Spar Aerospace; Computing Devices; Litton Systems Canada; Allied-Signal; MacDonald Dettwiler; Devtek (Hermes); Prior Data; Hughes Canada; Paramax; Dy-4; COM DEV; Raytheon and Lockheed Canada.

Under the Canada-U.S. Defence Production Sharing Arrangement, Canadian industry enjoys privileged access to U.S. defence markets, exempting Canada from basic "Buy America" legislation. U.S. legislation also defines Canadian industry as part of the "domestic" industrial base. However, over the years, specific-purpose legislation, from which Canada is not exempted, has restricted industry access either directly or indirectly, by making it subject to bureaucratic interpretation. With the reduced defence expenditures, these non-tariff barriers are noticeably

increasing. Most of Canadian trade in these markets is won competitively through prime contractors. Canadian access to the commercial aviation and marine electronics markets is generally open unless the product is sold directly to U.S. government agencies such as the Federal Aviation Administration, exempted under GATT and the FTA.

Accessible and suitable markets exist for Canadian products in the newly industrialized economies of the Pacific Rim and Middle East: the Republic of Korea, Malaysia, Thailand, Indonesia, Egypt, Saudi Arabia, Kuwait, etc. Canada has new defence industrial cooperation Memoranda of Understanding with Spain, Saudi Arabia and Australia; others are under consideration. Unless Canadian firms have developed a local presence, they should deal through local agents familiar with the local business and political culture. Competition is keen. Local production may be required; local repair and overhaul (R&O) facilities are a must.

In spite of the declining, highly competitive markets worldwide, the Canadian defence industry is not only competitive, but often dominant in consulting, engineering services and producing products for the following market segments:

- ASW: processors, software and sensors
- shipboard systems: machinery control, distributed power control, AAW, shipboard communications (combat and "ruggedized") and displays
- communications systems (commercial and military), combat radios and radio relays and Military Satellite Communications (MILSATCOM)
- fire control systems: weapons and armoured fighting vehicles
- avionics: active matrix liquid crystal displays, Global Positioning System (GPS) receivers and antennae
- simulators and training devices: aircraft, ATC and ATC communications, task trainers
- ATC: oceanic systems, ATC systems, approach radar, microwave landing systems, communications systems, navigation aids (NAVAIDS), software, systems integration and consulting
- vessel traffic management and coastal intrusion detection systems and consulting
- components: Marine Industries Limited (MIL), ARINC specification connectors, printed circuit boards, enclosures, wiring harnesses, Vessa Modula Europa (VME) systems and subsystems
- software: customized and application specific software.

Strategic Direction

- Maintain, if not improve, Canadian access to key U.S. defence and ATC markets of direct interest to Canadian industry by influencing legislation and key decision makers to counter growing protectionist sentiment. (DFAIT)
- Provide Canadian industry with a consolidated presence at influential defence, simulation and ATC. (DFAIT)
- Increase Industry Canada, DFAIT and DND support of Canadian corporate initiatives in the Middle East through the Dubai defence exhibition, incoming missions and an outgoing mission in conjunction with the exhibition.
- Increase Industry Canada, DFAIT and DND support to the Pacific Rim, such as a directed marketing campaign aimed at selling Canadian high-technology products in that market. (Industry Canada)
- Based on industry's supply capability, explore the need for an industry-driven marketing campaign to expose Canadian systems and subsystems' capability to U.S. shipyards: define the market, its needs, its decision makers and how to reach and influence them. (Industry Canada)

- In conjunction with industry, define the available market for ATC products and systems and the probability of penetrating the markets from Canada. Particular emphasis on markets outside the EC and the U.S. Devise best marketing approach. (Industry Canada)
- Encourage and assist industry initiatives in the development of alliances, partnerships and related business arrangements, particularly in emerging markets.

Contact

Defence Electronics Directorate
Space, Marine and Defence Branch
Industry Canada
Tel.: (613) 954-3334
Fax: (613) 954-4246

Marine and Land Defence Systems

The marine and land defence systems sector consists of five subsectors: marine defence products, munitions, defence technologies, defence security products, and military vehicles and components.

The marine defence products subsector includes the manufacture of ship components, helicopter and cable-handling systems, underwater rebreathers and replenishment-at-sea systems. The munitions subsector focuses on the manufacture of small arms, propellants and ammunition. The defence technologies subsector includes products for advanced applications such as alternative power sources, the environment, optics, robotics and advanced materials. The defence security products subsector includes products for access control, surveillance, explosive ordnance disposal and protective clothing and equipment. The military vehicles and components subsector comprises the manufacture of military vehicles, the supply of subsystems and components, as well as the repair and overhaul (R&O) of vehicle systems.

International Environment

Declining global defence budgets and procurement have had a major impact on the industrialized nations producing strategic and tactical high-technology, sophisticated and conventional weapons systems. While expensive nuclear weapons, advanced missiles and aircraft programs are being scaled down or terminated, there is a growing recognition that lighter modern conventional forces are required for national and international security commitments. Life-extension and improvement programs, R&O and spare parts for existing equipment, the acquisition of new light, rapid-response conventional equipment for peacekeeping, and environmental technologies relative to the defence industry, represent the most promising areas for global defence markets' future growth.

Governments in North America and Europe are continuing to encourage economic conversion

of defence industries from traditional military production to alternative military or civilian production. Dual-use products and technologies meeting defence requirements will continue to offer "downstream promises," particularly in the fields of robotics, environmental technologies and security products. Companies that have unique technologies to develop products for niche markets, plus an aggressive global outlook, are succeeding internationally.

The world's largest defence markets are the U.S., Europe, the Asia-Pacific region and the Middle East. The U.S. is by far the largest defence market in the world, although sales to the U.S. are declining due to budget constraints and increased domestic competition. Growing potential markets include Asia-Pacific countries, the Middle East and Turkey.

The post-cold-war era will also mean new policies for the development and acquisition of new systems and weapons. More and more, nations are seeking to maintain their own capabilities while keeping costs in line with reduced defence budgets. The question of market access will remain a problem as individual countries will maintain non-tariff trade barriers and seek to strengthen and maintain key domestic suppliers. Although budgets around the world are declining, there will continue to be opportunities for companies that do any of the following:

- provide defence products meeting niche market needs
- provide the maintenance of existing defence capabilities
- provide equipment and training needs of a second generation of peacekeeping
- produce dual-use products and technologies.

These opportunities will be dependent on greater international cooperation, product standardization, off-the-shelf procurement and joint ventures for the development and modernization of systems and weapons.

Canadian Position

Generally, firms within the marine and land defence systems industry sector are specialized defence subcontractors that rely primarily on the domestic and the U.S. markets. In all, the sector is composed of approximately 300 small to medium-sized companies, including the defence divisions of several offshore-based multinational corporations. Only a few companies have annual sales in excess of \$100 million. A recent sample of the major players indicates that overall annual sales are estimated at \$2.5 billion, of which 45 percent is exported. On average, the industry employs about 14 000 people.

Canadian companies in the defence products industry sector are generally smaller than those in other industrialized nations. Canadian firms have concentrated their efforts on developing subsystems and components for defence niche markets. Successful products include precision optics, large and small-scale robotic systems, aluminum/oxygen fuel cells, bomb disposal suits and systems, light armoured vehicles, helicopter haul-down and ship-to-ship transport systems, explosive and narcotic detectors, and military land and sea apparel.

Canadian export activities are directed primarily towards the U.S., although moderate sales have been made to Europe, the Middle East and Asia. Canadian companies that develop new products often see an initial sale to DND as a necessary step to obtain export sales.

In the U.S., specialized Canadian firms that are bona fide subcontractors to major U.S. defence contractors have done well. Nevertheless, Canadian firms must improve long-term strategic relationships with their U.S. counterparts. They

will also have to develop new technologies and innovative defence products and services that respond to the needs of major U.S. defence markets if they are to succeed in this increasingly competitive environment. The U.S. continues to be Canada's largest market for marine and land defence products.

In Europe, Canadian companies have had some success in penetrating niche markets with unique competitively priced products. Successful products include narcotics detectors, remote-controlled robots for bomb disposal, bomb disposal apparel, fire detection systems, water rebreathers and shipboard helicopter recovery and cable-handling systems. While it will become increasingly difficult to penetrate the traditional defence market as expenditures continue to decline, Canada is in a good position to benefit from the EC's continuing wide preoccupation with security and antiterrorism measures. Turkey continues to offer excellent opportunities for Canada with its ongoing armed forces modernization programs and strong domestic security threats. Canadian businesses will have to strengthen their competitive position by forging strategic joint-venture partnerships including establishing branch plants, in order to make significant inroads in the European marketplace where cooperation between European countries is growing.

In the Middle East markets, Canadian companies have been successful in Saudi Arabia, Kuwait and Qatar. Products sold include light armoured vehicles, protective clothing and water rebreathers. The Middle East countries, particularly the United Arab Emirates and Kuwait, are key prospective markets for all types of marine and land defence products. Although considerable time, effort and commitment are required to finalize any sale in the Middle East, this market has much potential in the future.

In Asia-Pacific countries, a number of Canadian businesses have successfully sold niche products. Sales have been made in the Republic of Korea, Taiwan, Australia, New Zealand and Japan. More

focused effort is required to promote Canadian technology and expertise in marine and land defence products in order to realize the market potential fully. East Asia, specifically the Republic of Korea, Taiwan, Malaysia and Singapore, are the most promising markets for sales of Canadian defence products.

In summary, although the U.S. will remain Canada's primary defence market, significant prospects are developing in East Asia, where a defensive build-up is taking place. In 1991, the countries in that area accounted for 34 percent of all major defence purchases. Several Canadian defence companies are pursuing defence and related high-technology sales opportunities in the Asia-Pacific and Middle East markets. However, because defence intelligence is often difficult to access, the use of defence sales agents is essential to obtain details on defence contracts not otherwise available to foreigners. Companies will also have to consider offset program requirements which are often quite stringent.

Strategic Direction

There is a spectrum of strategic challenges confronting the marine and land defence systems sector. Some subsector companies are doing well and are seeking to increase market share in global defence and civilian markets, while others are experiencing difficulty and will have to concentrate their efforts on maintaining a viable operation and adjust to domestic and global market changes. Government efforts will:

- conduct and update Global Market Opportunity Reviews with priority on the U.S., and in growing key markets outside of Europe including the Middle East and the Asia-Pacific region to identify strategic intelligence and opportunities and disseminate market information to Canadian stakeholders (DFAIT)
- participate in a potential interdepartmental Asia-Pacific initiative to improve Canada's image as a source of high and advanced-technology products and services by supporting projects to market Canada's state-of-the-art naval defence and other high-technology products (Industry Canada, DFAIT, DND)
- participate in strategically directed outgoing and incoming industry trade missions, major international trade fairs and promotional activities, particularly in the fields of robotics, advanced materials, defence security products, marine, and environmental products and services, in order to assist industry in accessing global markets (Industry Canada, DFAIT, DND)
- encourage new investment and joint ventures by providing information to potential global customers in the form of Canadian capability guides such as the *Canadian Marine and Naval Products Catalogue* and the *Canadian Marine and Land Defence and Industrial Products and Services Catalogue* (Industry Canada, DFAIT)
- foster the development of improved business networks and strategic partnerships by providing a forum with stakeholders in the appropriate subsectors to discuss the merits of forming export consortia to exploit opportunities in the Pacific Rim countries and other markets (Industry Canada, DFAIT, DND)
- encourage investment through the delivery of funded programs (Defence Industry Productivity Program, Defence Development Sharing Arrangement) in Canadian producers in defence conversion, as well as in developing dual-use products for niche markets in areas of advanced and emerging technologies (peacekeeping and environmental) in cooperation with the defence end user (Industry Canada, DFAIT, DND)

- encourage the reduction of non-tariff barriers by monitoring the U.S. legislative environment and advocating Canada's exclusion from the provisions of protectionist regulations and practices (DFAIT, Industry Canada)
- strengthen ties between government and industry associations by encouraging industry to participate actively in existing defence industry associations (Canadian Defence Preparedness Association, Canadian Maritime Industries Association, Aerospace Industries Association of Canada) to develop enhanced ties with their international counterparts in the U.S. and overseas, and to offer a broad range of business services to the marine and land defence systems sector companies in marketing, new technology development, investment, joint ventures, skills upgrading, purchasing and contracting. (Industry Canada, DFAIT)

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Industry and Science Canada
1993

Contact

Marine and Land Defence Systems Directorate
Space, Marine and Defence Branch
Industry Canada
Tel.: (613) 954-3388
Fax: (613) 957-8912

* Currently being reviewed.

Defence and Related Products

Activity	Date	Location	Dept.	Contact
Africa and the Middle East				
Outgoing Mission to ASTEX	Oct 1994	Saudi Arabia*	DFAIT	(613) 944-5984
Security Products Seminar & IDEX '95	Mar 1995	Abu Dhabi, United Arab Emirates	DFAIT	(613) 944-6847
Asia Pacific South				
Defence Services Asia Show	Apr 1994	Kuala Lumpur, Malaysia	DFAIT	(613) 996-3667
Canadian Patrol Frigate (CPF) — Far East Marketing Tour	Jul 1994	Tokyo, Japan Seoul, Republic of Korea Hong Kong Singapore Thailand* Malaysia*	DND	(613) 992-3868
Royal Thai Navy Mission to Canada	Sep 1994	Canada*	DFAIT	(613) 996-7256
Strategic Alliance Initiatives Mission to Australia	Mar 1995	Canberra, Australia	DFAIT	(613) 995-7652
Langkawi International Maritime and Defence Show	Dec 1995	Langkawi, Malaysia	DFAIT	(613) 996-5824
East Asia				
Securitex '94	Jun 1994	Hong Kong South China*	DFAIT	(613) 992-6129
Sub-Sea Engineering Technology Seminar	Jul 1994	Taipei, Taiwan	DFAIT	(613) 996-7582
SAR (Search & Rescue)	Oct 1994	Taipei, Taiwan	DFAIT	(613) 996-7582
Search and Rescue Incoming Mission	Oct 1994	Taipei, Taiwan	DFAIT	(613) 996-7582
United States				
Canadian Product Showcases	Apr 1994	Washington, D.C.	DFAIT	(613) 944-9481
Contractor Information System	Apr 1994	Philadelphia, Pennsylvania	DFAIT	(613) 944-9481
Defence Mission	Apr 1994	Colorado* Minneapolis, Minnesota	DFAIT	(613) 944-9481
Defence Production/Defence Development	Apr 1994	Ottawa, Ontario	DFAIT	(613) 944-9481
Director Civilian Scientific Careers (DCSC) Mission to B.C./Manitoba/Ontario	May 1994	Dayton, Ohio	DFAIT	(613) 944-9481
Partnering Seminar for Hi-Tech Companies	May 1994	Buffalo, New York	DFAIT	(613) 944-9481
Communication and Electronics Command (CECOM)	Jun 1994	Princeton, New Jersey	DFAIT	(613) 944-9481

* Exact dates and/or cities to be determined.

Canada's International Trade Business Plan is made up of three key components: a Strategic Overview, a series of industry sector strategies, and an accompanying series of international activities lists. Industry sectors available include:

1. Advanced Manufacturing Technologies
2. Aeronautics
3. Agri-Food Products
4. Arts and Cultural Industries
5. Automotive
6. Biotechnologies
7. Business and Professional Services
8. Chemicals and Plastics
 - Chemicals and Petrochemicals
 - Plastics and Polymer Products
9. Consumer Products
 - Apparel Industry
 - Business and Institutional Furniture
 - Footwear
 - Hardware and Housewares
 - Household Furniture
 - Sporting Goods (including recreational watercraft)
 - Textiles
10. Defence and Related Products
 - Aviation, Marine and Defence Electronics
 - Marine and Land Defence Systems
11. Electrical and Energy Equipment
 - Electrical Equipment
 - Oil and Gas Field Equipment
12. Environmental Industries
13. Fish and Seafood Products
14. Forest Industries
15. Industrial Technologies
 - Agricultural Technology, Machinery and Equipment
 - Mining — Forestry — Pulp and Paper
 - Ocean and Marine Shipboard Technology
16. Information Technologies
17. Medical and Health-care Products
18. Minerals, Metals, Advanced Materials and Construction Products
19. Space
20. Tourism
21. Urban Transit and Rail

For information on how to receive the Strategic Overview, or additional industry sector strategies and international activities lists, please call: **1-800-267-8376**



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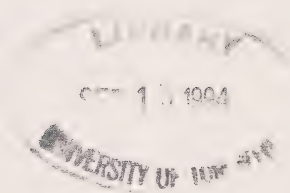
Canada's International Trade Business Plan

1994-1995

***An Integrated Plan for Trade, Investment
and Technology Development***



Doing Business Abroad



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Aussi disponible en français sous le titre Matériel électrique et biens d'équipement.



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Electrical Equipment

The electrical equipment sector comprises diverse subsectors producing a wide variety of products including equipment for hydro, thermal and nuclear generating stations, power transmission and distribution equipment, electrical wire and cable products, power and distribution transformers, control and protection equipment, power conversion equipment, electric motors, alternate energy equipment for power from solar, wind etc., standard and advanced technology batteries, and fuel cells.

Electrical utilities and the construction and manufacturing industries comprise the largest markets for the industry. Most electrical products are made for utilities, and it is in these products that Canada is most competitive internationally. The focus here will therefore be on utility products.

International Environment

Economic expansion cannot occur without electrical power. Power supply and electrical equipment needs increase on average at about the same rate as economic growth.

The global electrical equipment industry will continue operating in two distinct international growth environments:

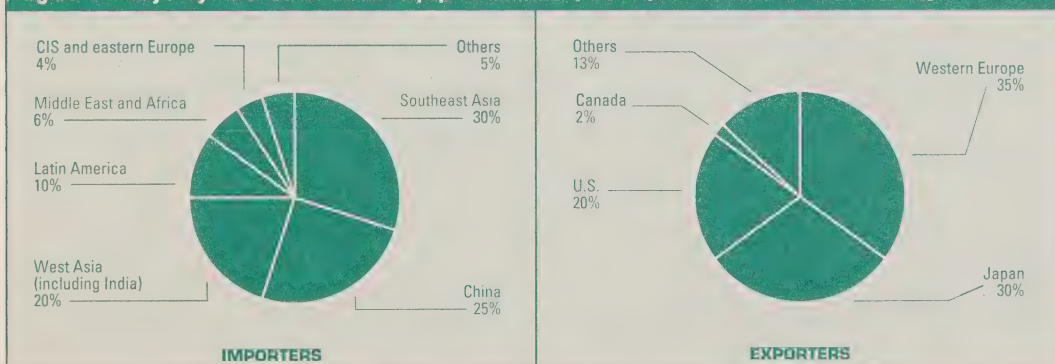
- the slow-growth developed world, comprising Canada and the U.S., Europe, and Japan, all of which have indigenous,

mature electrical manufacturing industries that will continue operating in surplus capacity in the 1990s

- the developing world, which lacks sufficient developed industries to meet its countries' growth demands, will continue to import electrical equipment from the developed world; engineered equipment and systems, such as larger generation and transmission equipment, will be particularly needed, especially in high-growth Asia (see Figure 1).

Current electric generating capacity in the world totals nearly 2 800 gigawatts. A gigawatt is a billion watts. Nearly 40 percent of this capacity is in eastern and western Europe. The U.S. and Canada account for just under 30 percent. The remainder, about one third of the total, is spread around the rest of the world — essentially Asia, Africa and Latin America. Highly developed and

Figure 1 — Key Players in the Electrical Equipment Market, 1993 (Estimated % of Total Market)



heavily electrified western Europe and North America will grow slowly in electricity needs. By contrast, the existing relatively low electrical capacity in the developing world will be substantially expanded.

For the balance of the decade, a growth of about 800 gigawatts, an increase of over 30 percent, is expected worldwide. This will require about \$3 trillion in electrical equipment.

The largest potential new market is in Asia, which will experience a third of the world's total increase in capacity by the end of the decade. There, the addition of 250 gigawatts will increase present capacity by about 50 percent. The largest expansion in electrical systems will probably be in China, growing at about 9.5 percent per year. Strong growth is also expected in other Asian countries, especially the Republic of Korea, Taiwan and the Southeast Asian nations.

Africa, Latin America and the Middle East, in the earlier stages of economic and industrial development, also have a great need to add electric power, but the combined capacity growth rate (about 4.2 percent) will be lower than Asia's.

In the U.S., the emphasis will be on refurbishing and upgrading existing plants and systems. The U.S. utilities are trying to hold down major investments in new plants and equipment. As a result, only a 2-percent annual growth rate is expected for the balance of the decade in the U.S. Despite the slow growth overall, there will be large new demands for certain equipment needed for the upgrading. By 1995, almost two thirds of all U.S. utility generating facilities will be 20 years old, and nearly one third will be at or near the end of their originally expected economic life. U.S. authorities have cancelled over 100 nuclear plants since the mid-1970s, and none have been ordered. This places still greater demands on fossil-fired plants, even though these facilities face increasingly stringent environmental restrictions. There will also be a heavy emphasis on gas turbines, especially with the availability of reasonably priced natural gas.

Market growth will also be low in Europe, about 1.8 percent per year, for a total increase of about 200 gigawatts by the end of the century. While this will be a relatively small percentage increase for Europe, in absolute terms it represents about a quarter of the total addition worldwide. The greatest market potential will likely be in eastern Europe, which desperately needs power to support economic expansion. It also needs to upgrade and replace many old, dirty plants.

Nuclear energy opportunities exist in Turkey, the Republic of Korea and other markets. This, together with rapidly increasing energy demands in the Asia-Pacific region and in newly industrializing countries in general, make it seem likely that the demand for nuclear energy systems will shortly enter a new positive phase opening opportunities for Canada.

Major Trends

The following trends are altering the nature of the global electrical equipment market:

- shortages of capital for major projects (Financing will be a major factor in project competitiveness. The BOT [build-operate-transfer] technique will become increasingly important in export projects).
- an oversupply of electricity in much of the developed world, and a corresponding undersupply in much of the developing world
- a large increase in the requirement for equipment to replace and refurbish older power plants and systems
- a strong worldwide emphasis on energy conservation which will continue to reduce utilities' new construction needs
- increased emphasis on equipment and systems for improving electrical system efficiencies resulting in more sophisticated, higher-technology equipment, especially electrical control equipment

- increased training needs to adapt to the higher-technology equipment
- a substantially increased demand for alternative energy equipment and systems, especially in the areas of cogeneration, solar power and wind systems
- increased manufacturing capabilities in the developing countries, many of which are projected to be self-sufficient by the year 2020
- continued manufacturing rationalization with increasing efficiencies on a global basis, including:
 - a continuing major restructuring of the industry, particularly within the EC and North America
 - continuing employment downsizing in the larger multinational manufacturers, who produce most of the industry's output
 - some future plant closings.
- changes in legal and business practices, such as privatization, in many developing countries (e.g. Malaysia, India) which are attracting western participation
- a gradual harmonization of electrical standards worldwide, reducing these non-tariff barriers to trade
- increased global competition, always fierce in the past, which has become even more so with slow growth in western countries.

Canadian Position

The electrical equipment manufacturing industry in Canada employs approximately 80 000 people and ships about \$9 billion in products annually, \$2 billion of which are exports. While shipments have declined since the beginning of the recession, a slow recovery is under way with 1993 output showing a marginal increase over 1992. Total industry employment continues to decline,

however. Nevertheless, the industry's productivity and international competitiveness continue to increase substantially, and exports are growing.

Manufacturers can be divided into two categories: small, Canadian-owned firms producing specialized products for niche markets; and larger, foreign-owned multinational companies. The most successful exporting subsidiaries have world product mandates. In some cases, exporting by the subsidiary is limited to Canadian-financed projects.

The Canadian domestic market has suffered in recent years with the cancellation of large power projects, the strong trend to conservation and slow economic growth in general. As a result, exports have become increasingly important for the industry's survival.

Strengths

Canada has developed an international reputation and image as a reliable supplier of high-quality products with the most advanced technologies. Canada is most competitive in custom-made and specialty electrical products, especially larger generation and transmission equipment including:

- hydro generators and turbines
- power plant ancillary equipment
- custom specialty electrical products and systems
- boilers
- nuclear reactors and associated equipment for nuclear plants
- medium and large power transformers
- shunt reactors
- medium and high-voltage capacitors
- specialty wire and cable
- protection equipment
- control equipment
- engineered substations
- supervisory control and data acquisition (SCADA) equipment.

R&D activities have enabled many Canadian firms to become competitive in these areas. R&D activities concentrated in the provincial electrical utilities have been especially productive in developing competitive, state-of-the-art equipment. The utilities of Ontario, Quebec and British Columbia have large well-equipped R&D divisions with world-class testing facilities, and the industry works closely with these provincial utilities for R&D in electrical products.

Alternative energy sources (solar, wind, fuel cells, etc.) are also drawing renewed interest. Those subsectors involved in energy savings and improved system efficiencies are growing rapidly. Many analysts also see the electric automobile being produced in significant numbers by the end of the decade.

A number of world-competitive products have been developed in Canada where subsidiaries have been granted world product mandates. Hydrogenerators and cold climate SF-6 switchgear are examples. Canadian subsidiaries have also benefited from access to state-of-the-art technology developed in large U.S. and European R&D facilities. Smaller, independent manufacturers have been able to acquire and then develop their own technologies through international licensing arrangements and other types of alliances.

Product quality is also a major strength of Canadian companies and has been a key in competing against Japanese and European manufacturers in Third World power-sector markets. The CSA's stringent requirements for Canadian manufacturers and the quality standards required to cope with Canada's severe operating conditions are recognized worldwide by electrical equipment buyers.

Challenges to Exporting

Even with the many competitive strengths that Canada enjoys, the Canadian firms face many challenges in adapting to the trends and global changes affecting the industry.

- The industry continues to work with government and trade unions on the difficult challenge of developing the skilled tradespeople and technologists that it needs to remain competitive internationally.
- Non-tariff and tariff barriers remain an impediment to selling to the developed world, even in the U.S., the world's largest existing market for electrical equipment.
- "Buy America" policies remain a non-tariff barrier to the U.S. utility market and have resulted in some companies establishing U.S. subsidiaries to ensure that they remain eligible to sell in that country. In addition, many U.S. states have employment or procurement legislation giving their manufacturers preference over out-of-state suppliers.
- The Western European and Japanese markets remain largely closed to Canada due to local competition and non-tariff barriers.
- Many firms are small, undercapitalized and still carry heavy debt loads incurred during the 1980s. Consequently, they often lack the resources needed to carry out extensive research and promotional programs.
- Project financing is a constraint to exporting, especially where foreign governments support their firms with concessional financing.
- There is a need to increase the exposure of many smaller firms (which make up most of the sector) to innovative techniques and export strategies.
- Canadian firms entering developing country markets must:
 - be prepared to compete aggressively against stiff European, Japanese and U.S. competition
 - take the long-term strategic approach and devote the resources necessary for a

sustained marketing effort over a period of years

- consider a local agent as a practical necessity and essential in dealing with local buyers
- be prepared to establish joint ventures to set up local manufacturing facilities.

Geographic Priorities

The greatest potential new markets for Canadian electrical equipment are the burgeoning power sectors of developing countries in Asia, South America and Africa. In particular:

Pacific Rim

Pakistan, India, Thailand, China, the Republic of Korea, Taiwan, Malaysia, Indonesia, Singapore, Philippines, New Zealand, Vietnam and Laos

Latin America

Mexico, Venezuela, Colombia, Chile, Brazil and Argentina

Africa and Middle East

Israel, Iran, Saudi Arabia, Turkey, Egypt, Algeria and Cameroon.

The Canadian industry must export to survive, especially with the slower-growth domestic market of the 1990s. Canadian suppliers should be in a position to capture \$25 billion or about 1 percent of the total world market during 1993-2000. The implementation of NAFTA on January 1, 1994, will open up new markets in the growing Mexican power sector, and the FTA, implemented on January 1, 1989, will continue to expand exports to the U.S. While our largest existing market is the U.S., most of the future expansion will take place in the developing countries, particularly the Pacific Rim where Canadian firms are experiencing success. The demand for electrical power equipment in these countries will be directly dependent upon their continued economic growth.

Strategic Direction

The following measures are recommended to increase exports from the Canadian electrical sector over the next few years:

- encourage more collaborative approaches to bidding on large power projects in developing countries; in the area of electric power systems, the companies are being encouraged to join under CAPSEP (Canadian Power Systems Export Promotion) to bid on such projects; CAPSEP includes consultants, utilities and constructors in addition to the electrical equipment manufacturers (Industry Canada, DFAIT, EDC)
- provide "a level playing field" for Canadian firms competing against government-supported foreign competitors by working to eliminate the international practices of issuing grants for domestic exporters and tying developing country aid to export credits; and providing in the interim, supportive and competitive Canadian programs to neutralize this type of support by foreign governments for their own exporters (Industry Canada, DFAIT, CIDA, EDC)
- use government financing to encourage Canadian subsidiaries to secure research and product mandates from their parent companies (EDC, CIDA)
- use existing programs (e.g. Industry Energy Research and Development Program [IERD], and Industrial Research Assistance Program [IRAP]) to support emerging electrotechnologies, especially those involved with energy savings, alternate energy and improved electrical system efficiencies (Industry Canada, NRC, NRCan)

- enhance cooperation and communications between International Trade Canada and Industry Canada sector officers to provide companies more effectively with market intelligence and identification, and international exposure through participation in missions, trade fairs and conferences (Industry Canada, DFAIT)
- encourage industry to participate actively in existing industry associations and serve as a conduit on issues of interest to members (Industry Canada, DFAIT)
- help industry associations undertake their defined objectives to improve their members' export capabilities (Industry Canada, DFAIT)
- encourage the industry to continue harmonizing electrical standards, especially with the U.S. (Industry Canada)
- continue to encourage companies, particularly small and medium-sized firms, to "think globally" and become proactive in considering potential new markets and forging strategic alliances (Industry Canada, DFAIT)
- encourage Canadian consultants to specify Canadian equipment wherever possible (CIDA, Industry Canada, DFAIT, EDC)
- continue to encourage electrical equipment exporters to use the wide range of services and assistance provided by Canada's world-wide network of embassies and consulates. (Industry Canada, DFAIT, EDC)

Contact

Energy Technologies Directorate
Manufacturing and Processing
Technologies Branch
Industry Canada
Tel.: (613) 954-3262
Fax: (613) 941-2463

Electrical and Energy Equipment — Electrical Equipment

Activity	Date	Location	Dept.	Contact
Africa and the Middle East				
Incoming Mission/Moroccan Department of Energy Officials	Sep 1994	Canada*	DFAIT	(613) 944-0396
Asia Pacific South				
Power Generation Equipment and Related Services Mission to Association of South East Asian Nations (ASEAN) Countries	TBD*	Malaysia* Thailand* Indonesia*	Industry Canada	(613) 954-3251
Incoming Mission of Indian Developers & Operators to Explore Canadian Equipment and Service Capabilities	May 1994	Canada*	DFAIT	(613) 996-5903
AIEE	Jun 1994	Sydney, Australia	DFAIT	(613) 996-1052
Power & Energy Mission to Canada	Jun 1994	Canada*	DFAIT	(613) 996-7256
Energy & Environment '94 Conference and Exhibition	Nov 1994	Philippines*	DFAIT	(613) 996-7659
Private Power Generation Mission to Pakistan	Jan 1995	Pakistan*	DFAIT	(613) 992-0952
East Asia				
Geothermal Power Generation Venture Capital	May 1994	Hualien, Taiwan	DFAIT	(613) 995-8705
Incoming Power Generation and Transmission Mission from Vietnam	Oct 1994	Canada*	Industry Canada	(613) 954-3262
Saigon Electricity Expo	Nov 1994	Ho Chi Minh, Vietnam	DFAIT	(613) 995-8705
Electrical Power Transmission and Energy Conservation Technologies Mission to China	Mar 1995	China*	Industry Canada	(613) 954-3262
Latin America and the Caribbean				
Power Generation Equipment and Related Services Mission to Chile and Argentina	Sep 1994	Chile* Argentina*	Industry Canada	(613) 954-3251
Multiple Markets				
Business Opportunities Seminars	May 1994	Vancouver, B.C. Edmonton, Alberta Winnipeg, Manitoba** Toronto, Ontario Montreal, Quebec	DFAIT	(613) 996-6188
HydroVision '94	Aug 1994	Phoenix, Arizona	NRCAN	(613) 996-6119
International Air Conditioning, Heating and Refrigeration Exposition	Jan 1995	Philadelphia, Pennsylvania	Industry Canada	(613) 954-3227

* Exact dates and/or cities to be determined.

** Tentative.

Activity	Date	Location	Dept.	Contact
United States				
Institute of Electrical and Electronic Engineers/Power Engineering Society (IEEE/PES)	Apr 1994	Chicago, Illinois	DFAIT	(613) 944-5149
Instrument Society of America	May 1994	Washington, D.C.	DFAIT	(613) 944-5149
Midwest Electronics Expo	May 1994	Minneapolis, Minnesota	DFAIT	(613) 944-5149
Electric '94	Jun 1994	New York City, New York	DFAIT	(613) 944-5149
IEEE/PES	Oct 1994	Los Angeles, California	DFAIT	(613) 944-5149
Northcon '94	Oct 1994	Seattle, Washington	DFAIT	(613) 944-5149
U.S. Certification of Heating, Ventilating and Air Conditioning (HVAC) Products	Nov 1994	Canada*	DFAIT	(613) 944-7486
American Society of Heating, Refrigeration and Air-conditioning Engineers (ASHRAE)	Jan 1995	Houston, Texas	DFAIT	(613) 944-7486

* Exact dates and/or cities to be determined.

Oil and Gas Field Equipment

The manufacturers of oil and gas field equipment produce a wide variety of machinery and components used in exploring for oil and gas deposits, in drilling and servicing wells and in producing and initially processing oil and gas in the field. The industry encompasses manufacturers of geophysical prospecting equipment, drilling rigs and ancillary tools, pumping, cementing and well-fracturing units, and dehydrators, separators, treaters and other field-processing components. It also includes drilling and processing equipment on offshore platforms, but does not include the platforms or subsea equipment. In addition, manufacturers supply custom-made equipment, such as drilling rigs and field-processing units, plus a wide range of standard products and high-volume production items.

International Environment

The total world output for oil and gas field equipment is estimated at US\$30 billion per year. With capital spending by international oil and gas producers expected to approach \$200 billion per year for the next five years, growth in the oil and gas equipment sector is expected to remain high. Much of this business will be directed to suppliers of exploration and development drilling equipment, plants and transportation systems.

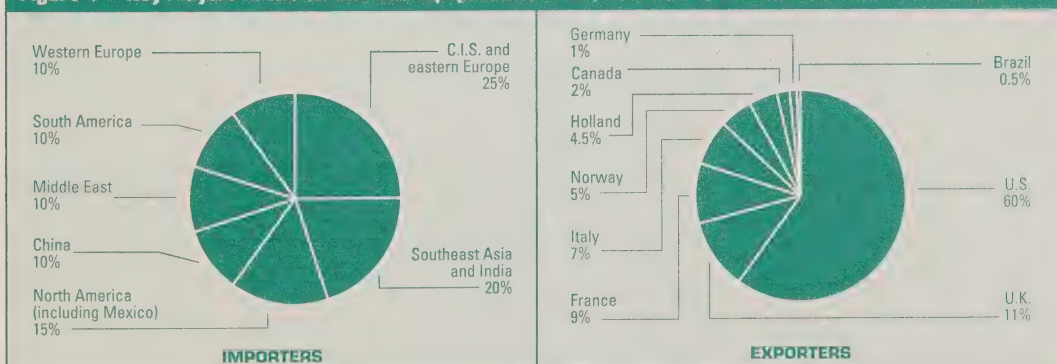
While oil and gas well drilling is declining in North America, important gains in petroleum drilling and production are taking place in Venezuela, Nigeria, Saudi Arabia, the CIS, Norway, Colombia, the North Sea, India, China and Iran. Many of the major oil companies, including smaller

Canadian firms, are expanding their exploration and production budgets for foreign operations. Changes to legal and business practices, such as privatization, are also attracting western participation in many countries (e.g. India).

A large portion of the demand for petroleum equipment is from government-owned or controlled oil and gas companies. Occasionally, the granting of a government licence to explore for petroleum is linked to the purchase of locally produced petroleum equipment.

Foreign markets are expected to take a larger share of this industry's output in the long term (see Figure 1). Oil companies are likely to spend a large portion of their exploration and development expenditures outside North America. The desire

Figure 1 — Key Players in the Oil and Gas Equipment Market, 1993 (% of Total US\$30 Billion Market)



Source: Industry Canada.

of many foreign petroleum-producing countries to earn hard currency through petroleum exports should encourage them to reduce restrictions on foreign investment and imports of petroleum equipment.

The development of new drilling and production techniques will stimulate the design of more productive oil-field equipment. Further refinements in three-dimensional survey equipment, measurement-while-drilling (MWD) instruments and horizontal drilling machinery, are likely to raise drilling rigs' productivity. The use of coiled tubing for well servicing and drilling operations is expected to continue to expand.

The worldwide market for oil and gas exploration and production (E&P) equipment and services (excluding China and the CIS) was \$45 billion in 1993. It is expected to grow to \$1.2 trillion in the next two decades. Canadian suppliers can capture \$60 billion or 5 percent of that market.

Perhaps the most compelling factor in favour of E&P equipment exports to developing countries is the rapid pace of technological change. Many developing countries need to maintain oil production to earn foreign exchange and cannot afford to wait for development of their domestic technical expertise.

Canadian Position

The Canadian oil and gas field equipment industry is composed of approximately 200 small to medium-sized establishments employing a total of about 4 400 people, including many skilled workers and professionals. In 1991, shipments were estimated at \$760 million, of which \$330 million or 43 percent were exports (see Figure 2 for export destinations).

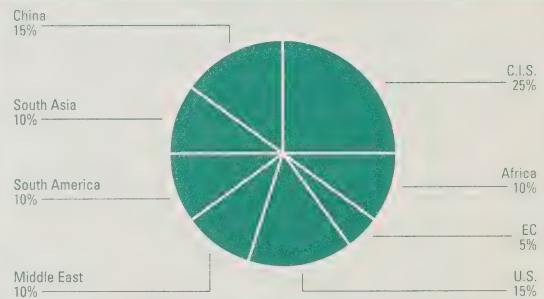
Canada's share of the world export market in 1991 was approximately 2.2 percent. Canadian imports were estimated at \$170 million (see Figure 3), representing 28 percent of the domestic

market. About 97 percent of imports came from the U.S.

The Canadian industry is strong in the areas of technology, product quality and after-sales service, particularly in specialized equipment developed to accommodate Canada's resource characteristics (sour gas, heavy oil and oil sands).

Canadian firms have developed advanced technologies related to drilling, as well as specialized recovery and processing products, often in cooperation with their key customers. These advanced technologies include automatic computer controls to reduce manual labour,

Figure 2 — Exports by Destination, 1991 (% of total)



Source: Industry Canada.

Figure 3 — Canadian Exports and Imports



Source: Industry Canada.

optimize processes and performance, and improve safety in operations on the rig floor. With a solid track record, Canadian firms have created the confidence in their equipment needed to gain and sustain markets based on a reputation for supplying high-quality products.

The sector has increased its productivity over the past 10 years by rationalization, installing more automated production equipment and making other production improvements. Numerous cost-reduction programs have been successfully implemented. As a result, the sector has been able to maintain its viability and expand exports despite the downturn in equipment requirements.

Despite its small world-market share, the Canadian oilfield manufacturing industry is recognized as one of the leading suppliers of niche advanced petroleum equipment and technologies.

- Canada is a world leader in specialized mining equipment for extracting oil sands (e.g. heavy-duty draglines) and sour gas gathering and treatment facilities. In the field of sour gas, Canada's expertise is unparalleled. Because of the high concentration of hydrogen sulphide (H_2S) in a number of its fields, Canada has developed some of the largest and most efficient gas plants in the world and has become the world leader in sour gas technology for sweetening, dehydration, cryogenic natural gas liquids recovery and sulphur processes. Canadian equipment designed especially for heavy oil, sour gas and tar sands is being exported to other nations that have similar reserves, such as India, China and the CIS. The experience of Canadian petroleum equipment manufacturers in providing technical expertise, training and advanced technologies to foreign countries with difficult oil formations should stimulate exports.
- Canadian firms have developed specialized techniques and equipment for secondary recovery from wells that have reached a low

rate of productivity (e.g. well stimulation by fracturing equipment and thermadrive boilers).

- Canadian companies have also made major advances in the development of top motor drives, winterized drilling rigs, directional and horizontal drilling techniques, computer-controlled automatic coring controls and automatic pipe-handling systems.

The financial, institutional and regulatory barriers to Canadian supplies' sales vary regionally. Because relatively few OECD countries have enough oil and gas reserves to support a major oil industry, there will be few sales to major Canadian trading partners such as Germany and Japan.

Most of the E&P equipment sold abroad by Canadian firms is presently manufactured in Canada but the trend is to manufacture locally in the country of operation.

The CIS is the most attractive market of all because its economy has developed a high degree of reliance on oil production and oil exports that may be difficult to sustain without state-of-the-art technology. Three major barriers impede participation by private firms: the chaotic state of the economy, the difficulty of expatriating profits in hard currency and getting paid in hard currency, and laws restricting private ownership.

The international market for oilfield equipment will be stimulated by technological advances and product improvements. The opportunities are greatest for those firms that have the experience and technology to develop and exploit a specialized market niche, as well as those producing small, custom-designed process plants.

To penetrate foreign markets, Canadian oil and gas field equipment companies are establishing foreign subsidiaries and joint ventures in the U.S., Europe, Latin America, the CIS, India and Southeast Asia. In addition, manufacturers are establishing a worldwide network of agents, distributors and service companies to ensure that parts and services will be readily available to

the foreign customers. In general, the desire of developing countries to maintain or expand their petroleum production and increase their portion of the value-added should ensure growth for Canadian equipment exports.

The major export market opportunities for Canada during the 1990s will be the Middle East including Saudi Arabia, east Asia (China and Vietnam), Mexico, the CIS, some South American countries and Africa. Canadian companies can also expect to benefit from increased business opportunities in the Eastern bloc countries, which have recently made changes to their ownership and joint-venture laws. This applies to Poland, Hungary and Romania, which all have indigenous oil and gas industries. Norway also presents major opportunities for Canadian companies with exploration development, production and pipelines investments forecast to exceed \$11.5 billion in 1993.

Opportunities exist in the CIS for Canadian oil and gas machinery, equipment and technology designed for northern Alberta and the Arctic. The Shtokomanovskoye gas field in the northern Barents Sea will cost \$20 billion to develop. In the Tyumen province of western Siberia alone, only 150 of the known 530 oil-gas deposits are developed and producing. At least 25 000 Russian wells are out of service, and an estimated 1 000 drilling rigs are needed to restore production to 1982 levels.

In the area of investment prospecting (strategic alliances), efforts should be targeted at the U.K., France, Italy, Germany and Norway, as firms in these countries are willing to establish a North American base activity. In addition, alliances represent a way of overcoming certain practices that hinder Canadian sales in these EC markets.

Strategic Direction

The strategic priorities for the oil and gas field equipment industry are shaped by the following bases of international competition:

- technological expertise in certain niche markets where Canadian firms have developed a superior product
- the availability of complementary services, such as engineering and training
- price competitiveness
- a physical presence in the market
- a proven international track record.

The key to the long-term growth of the Canadian oil patch depends on the successful expansion to countries with a strong and dynamic petroleum industry.

The government, in cooperation with industry, will:

- participate in recognized trade fairs outside Canada (e.g. Offshore Technology Conference in Houston, Texas; Offshore Northern Seas in Stavanger, Norway; NEFTAGAS '94 in Moscow, Russia; and Offshore Southeast Asia in Singapore) to increase export sales by 15 percent (DFAIT)
- participate in incoming missions of foreign buyers to meet with Canadian firms, particularly in conjunction with the National Petroleum Show in Calgary, Alberta (DFAIT, Posts, Petro-Trade)
- continue to identify investment opportunities and transfer foreign technologies and products (technology acquisition and transfer) through missions to and from countries such as France, the U.K., Norway, the U.S., Germany and Italy (Industry Canada, DFAIT, Posts)
- work with the Petroleum Services Association of Canada (PSAC) to establish a presence abroad, and with Petro-Trade, encourage Canadian firms in this sector, either by opening offices directly or by hiring Canadian expatriates who have worked in the market as local representatives in the key markets (A local representative acting for two to three Canadian companies can be a financially advantageous compromise for

medium-sized firms.) (Industry Canada, PSAC, Petro-Trade)

- encourage and assist firms to develop more market opportunity analysis and identification through the Program for Export Market Development (PEMD) in order to develop a substantial, long-term and sustained presence in a target foreign market (Industry Canada, DFAIT)
- assist PSAC and Petro-Trade to undertake their defined objectives in terms of export sales for members consistent with opportunities, supply capacity and trade development activities through comprehensive consultations with industry representatives to identify the most appropriate export strategies (Industry Canada, DFAIT, PSAC, Petro-Trade)
- place more emphasis on projects that highlight Canadian technology and expertise such as sour gas, heavy oil and secondary recovery projects (Industry Canada)

- encourage Petro Canada International Management Services (PCIMS) to specify Canadian-made equipment and services wherever possible (Industry Canada, PSAC)
- deliver foreign market/project opportunity information to Canadian firms as well as strategic information and analysis to business. (Industry Canada, DFAIT, Posts)

Contact

Energy Technologies Directorate
Manufacturing and Processing
Technologies Branch
Industry Canada
Tel.: (613) 954-3192
Fax: (613) 941-2463

Canada's International Trade Business Plan is made up of three key components: a Strategic Overview, a series of industry sector strategies, and an accompanying series of international activities lists. Industry sectors available include:

1. Advanced Manufacturing Technologies
2. Aeronautics
3. Agri-Food Products
4. Arts and Cultural Industries
5. Automotive
6. Biotechnologies
7. Business and Professional Services
8. Chemicals and Plastics
 - Chemicals and Petrochemicals
 - Plastics and Polymer Products
9. Consumer Products
 - Apparel Industry
 - Business and Institutional Furniture
 - Footwear
 - Hardware and Housewares
 - Household Furniture
 - Sporting Goods (including recreational watercraft)
 - Textiles
10. Defence and Related Products
 - Aviation, Marine and Defence Electronics
 - Marine and Land Defence Systems
11. Electrical and Energy Equipment
 - Electrical Equipment
 - Oil and Gas Field Equipment
12. Environmental Industries
13. Fish and Seafood Products
14. Forest Industries
15. Industrial Technologies
 - Agricultural Technology, Machinery and Equipment
 - Mining — Forestry — Pulp and Paper
 - Ocean and Marine Shipboard Technology
16. Information Technologies
17. Medical and Health-care Products
18. Minerals, Metals, Advanced Materials and Construction Products
19. Space
20. Tourism
21. Urban Transit and Rail

For information on how to receive the Strategic Overview, or additional industry sector strategies and international activities lists, please call: **1-800-267-8376**



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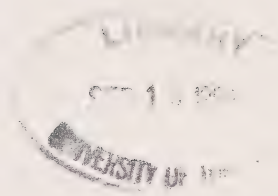
Canada's International Trade Business Plan

1994-1995

*An Integrated Plan for Trade, Investment
and Technology Development*



Doing Business Abroad



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Environmental Industries

The rapidly growing environmental sector provides a wide range of environmental conservation, pollution prevention, protection and enhancement products, and services for municipalities, manufacturers, resource industries and others.

International Environment

The world market for environmental products and services was estimated to be about US\$300 billion in 1992. This figure is expected to be US\$425 billion by 1997. OECD countries dominate the sector with some 82 percent of the world market. Typically, environmental products and services account for 1.2 percent to 1.5 percent of GDP for most OECD countries.

Recent market-growth forecasts call for an average annual rate of 9 percent over the next few years. Within that scenario, average annual growth rates are shown in Figure 1.

The U.S. market has seen consistent growth in solid waste management and resource recovery/recycling; however, priorities are shifting more to integrated waste management, to the management of hazardous waste and to air pollution controls. Many firms are positioning themselves to take advantage of 370 million consumers under

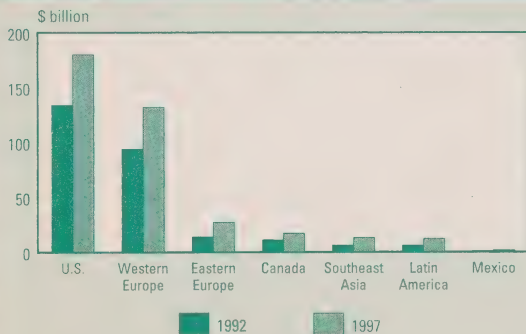
NAFTA, which was implemented on January 1, 1994, for new opportunities in trade, investment and technology development. This new southern perspective has found a number of companies pursuing opportunities further south, from Costa Rica to Brazil.

Worldwide, leading firms reveal that innovative and aggressive marketing has uncovered opportunities almost anywhere, from Norway to Israel and India. In western Europe, the highest growth rates are foreseen for Portugal, Greece and Spain. Much of Asia's growth in China, the Republic of Korea and Taiwan has been booming, attracting many Canadian firms seeking new opportunities. With the removal of sanctions on South Africa, many firms are expected to begin exploring this market.

Developing countries throughout the world offer significant opportunities in the environmental sector. They may, however, need support from International Financial Institutions (IFIs) and regional development banks. Strategic environmental planning and institution-building initiatives, such as those provided by CIDA, and capacity-building technical linkages, such as those provided by Environment Canada research institutes, will serve as a basis for further industry activity.

All IFIs are continuing to increase their commitment to environmental projects; for example, the World Bank lent \$2 billion in 1993. Other opportunity areas include United Nations Environment Programme (UNEP), the World Bank's Global Environment Trust Fund (GEF), Montreal Protocol on Substances that Deplete the Ozone Layer and CIDA. For new exporters, accessing these and more conventional sources of financing pose special demands for knowledgeable and effective packaging.

Figure 1 — Most Promising Global Markets



Source: *Environmental Business Journal*, 1993.

The following trends are expected to have an impact in the future:

- environmental considerations, manifested by domestic regulations, which are increasingly becoming non-tariff trade barriers and which shape trading relationships; these regulations keep out products, processes or industries originating in countries that are perceived as having less stringent environmental standards
- the market for environmental products and services, driven by public and other pressures, demanding that political leaders take action on resolving environmental problems through laws, regulations and funding
- the requirement over the long term that industry will be required to recognize and internalize environmental costs, manage pollution at the source, build in “process” changes rather than add on “end-of-pipe” solutions, and develop technologies that aim for “zero discharge”
- the growing worldwide recognition of the sustainable development link between the environment and the economy, and an emerging belief that long-term economic growth is only possible if the environment is simultaneously protected
- the inevitable and increasing linkage of environmental issues to issues of global security.

Canadian Position

Traditionally, the definition of the environment industry has included water and wastewater treatment, solid and hazardous waste treatment and air pollution controls. Canada's environment industry is composed of some 4 000 firms marketing a wide range of products and services. Largely composed of small and medium-sized enterprises, it represents 142 000 knowledge and

science-based jobs, with output per worker at \$130 000 — some 25 percent higher than general manufacturing.

However, in the new economic context — as this fast-growing sector is undergoing continuous definition, responsive to opportunities — the traditional definition is being re-examined. New urgencies are emerging for energy efficiency and renewal, for the sustainable management of resources and biodiversity. There is a case for the promotion of technologies across all industrial sectors which may be more environmentally friendly, from transportation systems to construction and a wide range of industrial processes and consumer products. A wider industry definition will become extremely important for future environmental industry development.

An estimated 65 percent of traditional environment firms provide services and 35 percent are involved in manufacturing. Canadian manufacturers of environmental products have shipments of about \$5 billion per year, while environmental services account for \$3 billion to \$4 billion in revenues. Exports amount to approximately \$1 billion annually, with almost 80 percent directed at the U.S. market.

Canada has a solid environmental science and technology base upon which to build, including R&D facilities within companies, universities and federal and provincial governments. Canada has also built a good reputation for monitoring and measurement instrumentation, solid and liquid-wastes handling equipment, with specialty incinerators, shredders, compactors, recycling systems and equipment. Capabilities extend to the manufacturing of equipment components, including attachments for pumps and valves, separators and filters. Production processes are relatively capital-intensive and contribute significant value-added.

The environmental services subsector includes firms that provide consulting and related engineering, scientific and technical services. These services are offered in such areas as resource conservation

and protection, water supply, sewage collection and treatment, solid waste disposal, industrial wastewater treatment, air pollution controls and energy conservation. Consulting engineering firms, solid waste management operators and recyclers, private laboratories and research establishments are included in this group.

Environmental services industry firms have won numerous offshore engineering projects and enjoyed success through various activities and projects supported by the IFIs. Multidisciplinary environmental consulting, acquisitions and mergers, joint ventures and strategic alliances are increasingly being used to enhance corporate capabilities and to maintain or expand market share.

The primary challenge is to continue building momentum in export markets, including markets of the developing world, with a strategic planning approach supportive of market-responsive environmental products and services. It is important for the industry to establish its dominance in the domestic market and to be well-positioned internationally, as the ever-competitive global industry matures. During the past five years active Canadian exporters have doubled to over 600 firms, with another 1 200 that are export-ready. The government will work to increase the number of exporters and to broaden their market base by pursuing new market opportunities with specially targeted initiatives.

Strategic Direction

To enhance the competitive position of the environmental sector the government will develop the following, in concert with the industry:

- market opportunities through cooperative information and intelligence sharing, targeted trade shows, missions and other exchanges, for technology acquisition, trade enhancement, investment and business alliances promotion (Industry Canada, DFAIT)
- strategic market planning for guiding trade, technology transfer and partnering arrangements with advanced countries in western Europe, Japan and others (Industry Canada, DFAIT)
- cooperation of Canadian services and products suppliers through strategic alliances, business networks and other links, for tackling specially targeted markets in Asia, Latin America, eastern and western Europe, the Middle East and other areas (Industry Canada, DFAIT)
- priority alliances among Canadian, Mexican and U.S. firms for investment, trade, technology transfer and new business development under NAFTA (Industry Canada, DFAIT, ENVCAN)
- country-to-country cooperative arrangements to improve trade access, such as Memoranda of Understanding (MOUs) with Poland and Spain (Industry Canada, DFAIT)
- strengthened international orientation and marketing capacity development of Canadian firms through strategic market intelligence, exporters training programs and a series of cross-Canada export market development workshops (Industry Canada, DFAIT, CCC, EDC, ACOA, FORD Q, WDO, ENVCAN)
- targeted pursuit of IFI-supported projects, with particular emphasis on Pacific Rim markets in Indonesia, Thailand, Malaysia and Singapore (Industry Canada, DFAIT)
- improved access and packaging of financial tools and enhanced Canadian industry participation in projects and activities funded by IFIs and donor agencies and in Canada-supported international environmental protocols (Industry Canada, EDC, CCC, DFAIT, CIDA, ENVCAN)

- trade and technology development through technical and capacity-building initiatives using information sharing and joint R&D programs (Industry Canada, ENVCAN, NRC, CIDA, DFAIT, NRCan, ACOA, FORD Q, WDO)
- technical training through agencies, such as the Canadian Office of Technology Transfer and the Canadian Office for Training in the Environment — that augment commercial activity, while conferring socio-economic benefits. (Industry Canada, ENVCAN, DFAIT, HRDC)

Contact

Environmental Industries Directorate
Environmental Affairs Branch
Industry Canada
Tel.: (613) 954-3382
Fax: (613) 952-9564

Environmental Industries

Activity	Date	Location	Dept.	Contact
Africa and the Middle East				
Construction and Environmental Products and Services Mission	Aug 1994	Amman, Jordan	DFAIT	(613) 944-6994
Incoming Sewage & Water Supply Management	Sep 1994	Toronto, Ontario	DFAIT	(613) 944-7029
Outgoing Mission to M.E. Water, Air & Environmental Pollution Exhibition	Nov 1994	Jordan*	DFAIT	(613) 944-6994
Incoming Buyers to Globe '95	Mar 1995	Vancouver, B.C.	DFAIT	(613) 944-0396
Jeddah C of C Environmental Equipment & Services Incoming Mission	Mar 1995	Toronto, Ontario Montreal, Quebec Vancouver, B.C.	DFAIT	(613) 944-5984
Asia Pacific South				
Business Development Program	Apr 1994	Jakarta, Indonesia Kuala Lumpur, Malaysia	Industry Canada	(613) 941-4214
Ozewater	May 1994	Sydney, Australia	DFAIT	(613) 995-7659
ENTECH	Jun 1994	Thailand*	DFAIT	(613) 995-7659
Business Mission to Southeast Asia	Oct 1994	Manila, Philippines Jakarta, Indonesia Kuala Lumpur, Malaysia Bangkok, Thailand	Industry Canada	(613) 941-4214
Ecotec	Nov 1994	Sydney, Australia	DFAIT	(613) 995-7652
Environmental Mission	Nov 1994	Thailand*	DFAIT	(613) 995-0959
Central/Eastern Europe and the Commonwealth of Independent States				
Assistance to Latvia in Remediation of Former Soviet Nationalized Properties	TBD*	Canada* Latvia*	ENVCAN	(613) 991-1842
Environmental Mission	May 1994	Warsaw, Poland	DFAIT	(613) 996-7107
Environmental Equipment and Services Mission	Oct 1994	Latvia* Estonia*	DFAIT	(613) 996-6652
East Asia				
Canadian Corporation & Technological Development for Korean Env. Met.	TBD*	Korea* Canada*	Industry Canada	(613) 954-6479
Ground Water Pollution Technology Transfer Seminar in Taipei	Apr 1994	Taipei, Taiwan	DFAIT	(613) 996-7582
Corrosion Prevention Technology Transfer Seminar	May 1994	Taichung, Taiwan	DFAIT	(613) 996-7582
Environment China in Guangzhou	Jun 1994	Guangzhou, China	DFAIT	(613) 995-6962
Environmental Protection Incoming Mission	Oct 1994	Canada*	DFAIT	(613) 996-7582

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
Seminar with Canadian participants attending Polmet '94	Nov 1994	Beijing, China	DFAIT	(613) 996-7582
Seminar on Canadian Advanced Environment Protection Technology — ENPROTECH '95	Feb 1995	Taipei, Taiwan	DFAIT	(613) 996-7582
Environmental Incoming Mission/Seminar	Aug 1995	Hong Kong	DFAIT	(613) 995-6962
Globe '96	Jan 1996	Canada*	DFAIT	(613) 995-6962
Japan				
Techno-Ocean '94	Oct 1994	Osaka, Japan	DFAIT	(613) 995-1678
Latin America and the Caribbean				
Expo '94	Apr 1994	Port of Spain, Trinidad and Tobago	DFAIT	(613) 943-8807
Sustech '94	Apr 1994	Bridgetown, Barbados	DFAIT	(613) 943-8807
Border Plan Mission	May 1994	Northern Mexico*	Industry Canada	(613) 954-3225
Environmental Protection Forum '94 (PROECO)	May 1994	Monterrey, Mexico	DFAIT	(613) 995-8804
Expopac '94	May 1994	Mexico City, Mexico	DFAIT	(613) 996-5359
Bogota International Fair '94	Jul 1994	Bogota, Colombia	DFAIT	(613) 996-5543
Solo Show and Investment Partnering Event on Solid Waste Management	Aug 1994	Mexico City, Mexico Monterrey, Mexico Guadalajara, Mexico	DFAIT	(613) 995-8804
Control Ambiental '94	Sep 1994	Mexico City, Mexico Jamaica* Bahamas*	DFAIT	(613) 995-8804
North American Air Conference & Exhibition — Emergency Clean Air Technologies & Business Opportunities	Sep 1994	Toronto, Ontario	Industry Canada	(613) 954-6479
24th Congress of the Interamerican Association of Sanitary and Environmental Engineering (AIDIS)	Oct 1994	Buenos Aires, Argentina	Industry Canada	(613) 954-3041
Fisa '94	Nov 1994	Santiago, Chile	DFAIT	(613) 996-4199
Canada Expo '95	Jan 1995	Monterrey, Mexico	DFAIT	(613) 996-5358
Expocomer '95	Mar 1995	Panama*	DFAIT	(613) 996-5358
Multiple Markets				
Opportunities under Montreal Protocol (Ozone Depleting Substances)	TBD*	Venezuela* Brazil* China*	Industry Canada	(613) 954-6479

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
United States				
Environmental Decision Support Systems — Decision Support 2001 International Conference	TBD*	Canada*	ENVCAN	(819) 953-1547
Mission (Water-Wastewater Sector)	Apr 1994	California/Texas Border*	DFAIT	(613) 944-9478
Mission Site Remediation Specialists	Apr 1994	Pittsburgh, Pennsylvania	DFAIT	(613) 944-9478
New England Environmental Expo	Apr 1994	Boston, Massachusetts	DFAIT	(613) 944-9478
Air & Waste Management Association	Jun 1994	Cincinnati, Ohio	DFAIT	(613) 944-9478
American Water Works Association	Jun 1994	New York, New York	DFAIT	(613) 944-9478
HAZMAT International	Jun 1994	Philadelphia, Pennsylvania	DFAIT	(613) 944-9478
Canada/U.S. Environmental (CUE) (Hazardous Waste)	Aug 1994	Oak Ridge, Tennessee	DFAIT	(613) 944-9478
Solid Waste Association of North America	Aug 1994	San Antonio, Texas	DFAIT	(613) 944-9478
TRICIPE "Hanford Clean-Up"	Aug 1994	TriCities, Washington	DFAIT	(613) 944-9478
DOD Environmental Round Table	Sep 1994	Philadelphia, Pennsylvania	DFAIT	(613) 944-9478
Mission — Los Alamos Federal Laboratory	Sep 1994	Los Alamos, New Mexico	DFAIT	(613) 994-9478
Hazardous Waste	Oct 1994	Michigan* Ohio*	DFAIT	(613) 944-9478
Water Environment Federation	Oct 1994	Chicago, Illinois	DFAIT	(613) 944-9478
Hanford Business Interchange (Hazardous Waste)	Nov 1994	Hanford, Washington	DFAIT	(613) 944-9478
HazMat West	Nov 1994	Long Beach, California	DFAIT	(613) 944-9478
SUPERFUND '95 Trade Show & Conference	Dec 1994	Washington, D.C.	DFAIT	(613) 944-9478
Environmental — (Hazardous Waste)	Jan 1995	Georgia* Alabama*	DFAIT	(613) 944-9478
Air Pollution Control	Feb 1995	Detroit, Michigan Cleveland, Ohio	DFAIT	(613) 944-9478
DOD "Clean-up of Picatinny Lake"	Feb 1995	Princeton, New Jersey	DFAIT	(613) 944-9478
Environmental Matchmaking Mission (SF)	Mar 1995	Los Angeles, California	DFAIT	(613) 944-9478

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
Military Bases Cleanup	Mar 1995	Alaska*	DFAIT	(613) 944-9478
Outgoing Mission	Mar 1995	Rocky Flats, Colorado	DFAIT	(613) 944-9478
Western Europe and European Community				
Wastewater Management Roundtable	TBD*	TBD*	DFAIT	(613) 996-6440
Outgoing Environmental Technology Mission EMTEC	May 1994	Helsinki, Finland Tampere, Finland	DFAIT	(613) 995-4730
NEXOS (New Exporters to Overseas Markets) Commercial/ Technology Mission	Aug 1994	Scandinavian countries*	DFAIT	(613) 995-8296
Canada/EC Seminar on the Environment and the Metals and Mining Industry	Sep 1994	Brussels, Belgium	NRCan	(613) 992-2096
Incoming Buyers and Technical Mission from Southern Europe and Mediterranean Region	Sep 1994	Portugal* Greece* Spain* Turkey*	Industry Canada	(902) 426-9475
NEXOS Mission to Aqua Expo	Sep 1994	Belgium*	DFAIT	(613) 995-6440
Outgoing Environmental Mission	Sep 1994	Zurich, Switzerland	DFAIT	(613) 996-5263
Strategic Alliance Scoping and Environmental Market	Sep 1994	Lisbon, Portugal Bilbao, Spain Barcelona, Spain Madrid, Spain	Industry Canada	(613) 954-3382
ENTSORGA (W/Group)	Sep 1994	Cologne, Germany	DFAIT	(613) 943-0611
ABSORGA '94	Oct 1994	Vienna, Austria	DFAIT	(613) 995-9766
Incoming Solid Waste Environmental Mission	Oct 1994	Canada*	DFAIT	(613) 995-9766
Pollutec 1994	Oct 1994	Lyon, France	DFAIT	(613) 996-2363
IWEX (International Water Treatment Technology)	Nov 1994	Birmingham, England	DFAIT	(613) 995-6565
Aquatech '94	Dec 1994	Netherlands*	DFAIT	(613) 995-6440
SMAGUA International	Feb 1995	Zaragoza, Spain	DFAIT	(613) 996-6440
Proma '95	Mar 1995	Bilbao, Spain	DFAIT	(613) 996-6440
TAU Expo (Environmental)	Mar 1995	Milan, Italy	DFAIT	(613) 995-9766

* Exact dates and/or cities to be determined.

Canada's International Trade Business Plan is made up of three key components: a Strategic Overview, a series of industry sector strategies, and an accompanying series of international activities lists. Industry sectors available include:

1. Advanced Manufacturing Technologies
2. Aeronautics
3. Agri-Food Products
4. Arts and Cultural Industries
5. Automotive
6. Biotechnologies
7. Business and Professional Services
8. Chemicals and Plastics
 - Chemicals and Petrochemicals
 - Plastics and Polymer Products
9. Consumer Products
 - Apparel Industry
 - Business and Institutional Furniture
 - Footwear
 - Hardware and Housewares
 - Household Furniture
 - Sporting Goods (including recreational watercraft)
 - Textiles
10. Defence and Related Products
 - Aviation, Marine and Defence Electronics
 - Marine and Land Defence Systems
11. Electrical and Energy Equipment
 - Electrical Equipment
 - Oil and Gas Field Equipment
12. Environmental Industries
13. Fish and Seafood Products
14. Forest Industries
15. Industrial Technologies
 - Agricultural Technology, Machinery and Equipment
 - Mining — Forestry — Pulp and Paper
 - Ocean and Marine Shipboard Technology
16. Information Technologies
17. Medical and Health-care Products
18. Minerals, Metals, Advanced Materials and Construction Products
19. Space
20. Tourism
21. Urban Transit and Rail

For information on how to receive the Strategic Overview, or additional industry sector strategies and international activities lists, please call: **1-800-267-8376**



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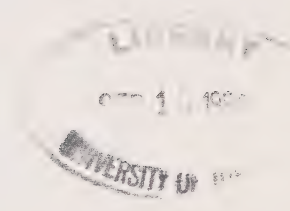
Canada's International Trade Business Plan

1994-1995

***An Integrated Plan for Trade, Investment
and Technology Development***



Doing Business Abroad



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Fish and Seafood Products

The Canadian fish and seafood industry comprises firms engaged in the processing and marketing of fish, shellfish and marine plants and animals as well as by-products such as fish meal and fish oil. Firms process fish taken by Canadian fish harvesters, produced by Canadian aquaculture (fish farming) operations or imported from foreign suppliers for further processing in Canada.

International Environment

The annual world harvest of fish and shellfish in 1991 was 96.6 million tonnes. World wild fish catch levels are flat or even decreasing and fish catch patterns have changed. World demand is now expected to grow steadily from under 100 million tonnes in 1990 to 120 million tonnes by the end of the decade. Despite the overbuilding of fishing fleets, the wild capture fishery catch has begun to decline. Aquaculture products will play an increasing role in meeting the demand.

Whereas 20 years ago, developed countries accounted for more than 60 percent of the catch, the situation is now reversed, with developing countries now harvesting this share. A striking illustration of the major change in wild fisheries catches is the increased role of China, which has overtaken both Japan and the former U.S.S.R. China is now responsible for 13.5 percent of the world catch (1991), an increase from the

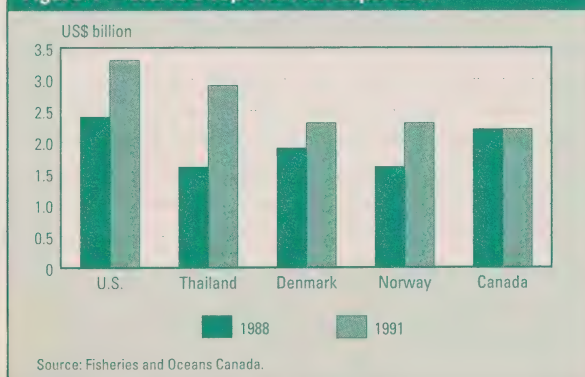
6.4 percent-level of 10 years earlier. The notable exception among developed countries is the U.S., with catches increasing, primarily due to Alaska pollock, from 4 million tonnes in 1982 to 5.5 million tonnes in 1991.

These trends have had a profound impact on Canada, as its share of the world catch has decreased from 1.8 percent in 1982 to 1.6 percent in 1991. The structural changes are especially apparent in the groundfish market, where Canada's share of the U.S. import market for frozen blocks and fillets of groundfish fell from 57 percent in 1981 to 34 percent in 1990. Canada's overall share of the value of world exports has decreased from 6.9 percent in 1988 to 5.8 percent in 1991 (see Figure 1).

Although Canada has been a beneficiary of reduced tariffs through the seven rounds of multi-lateral tariff cutting under GATT, some tariffs and non-tariff barriers (e.g. import licensing, quotas, unjustified technical standards, health regulations, etc.) continue to inhibit Canadian access to foreign markets. In addition, tariffs are significantly higher on further processed products. In the case of the EC, for instance, tariffs remain higher than in many developing countries.

Increasingly, consumer-driven environmental issues are likely to affect trade. These issues can be quite diverse and unpredictable and range from boycotts over driftnet fishing, "dolphin-safe tuna" or a wide range of environmental measures that can serve as impediments to trade. The world community is demonstrating a growing social consciousness, and international trade sanctions associated with this development could become a popular economic weapon of the decade.

Figure 1 — World's Top Five Fish Exporters



World aquaculture production in 1991 was a record 16.5 million tonnes (15 percent of global landings) with a value of US\$28.4 billion. China leads the world in aquaculture production having produced 2.3 million tonnes worth US\$9.5 billion. Aquacultured products are mostly high-value seafoods. For Canada, 1992 aquaculture output reached \$259 million. Additionally, the supply and services sector of the fish farming industry generated more than \$266 million in domestic and export sales.

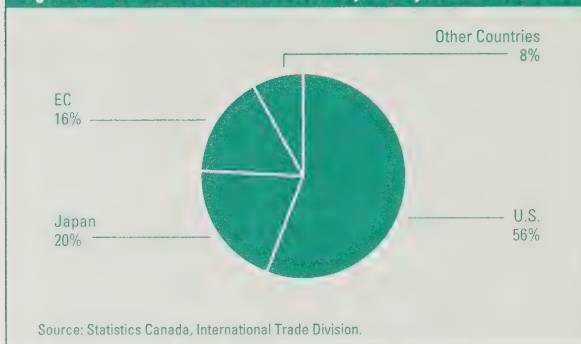
Canadian Position

The Canadian fish, marine plants and seafood industry has a highly diversified resource of shellfish, pelagics and groundfish, and is well regarded globally for producing and exporting a variety of top-quality, pollution-free products. Exports are primarily in the live, fresh, frozen, cured and canned forms. Processors pursue opportunities for innovative, ready-to-serve product forms in niche markets. The Canadian fishing industry is a major contributor to the economies of many Atlantic, Pacific and inland communities.

The industry is currently undergoing significant adjustment as a result of a global economic slowdown, supply shortages for certain finfish species, intense competition in foreign markets and increased global supply of certain groundfish species and salmon. Commercial landings are down across Canada, involving a 7-percent decline in the value of Atlantic catches between 1988 and 1992 and a 33-percent decline in the value of Pacific coast landings over the same period.

In terms of landed volume, Canada ranks sixteenth in the world. Canada exports over 80 percent by value of its commercial production. In 1992, Canadian exports were \$2.49 billion, making Canada the fifth-largest fish and seafood exporter (see Figure 2 for export destinations).

Figure 2 – Canadian Fish and Seafood Exports by Destination, 1992



Canada's Atlantic fishery is extensive and diverse. Groundfish traditionally have accounted for about two thirds of the 1.2 million tonnes harvested and about 40 percent of the landed value. Groundfish stocks, primarily cod, have collapsed in most areas and landings will be approximately 250 000 tonnes in 1993 and much lower in 1994. Low-value pelagics such as herring and mackerel remain in abundant supply; however, markets are weak. The shellfish sector, producing lobster, scallops, crab, etc. has been expanding and remains the only bright spot in the Atlantic fishery.

Salmon, herring and halibut are the mainstays of the Pacific commercial fishery sector, representing about 80 percent of the total wholesale value. Salmon represents 65 percent of the value of the Pacific fishery and roughly 66 percent of the fishing fleet and fishermen. Lower quotas are reducing the returns from the halibut fishery. The herring fishery has remained relatively strong, with significant returns. The impact of lower product prices for salmon on world markets is filtering down to the fishermen's level, resulting in changing demands on government: processors are insisting on a harvest management plan that would result in maximum flexibility in the use of raw material; communities are demanding protection of local jobs in the industry; and, traditional trade patterns are being challenged by a revised allocations process on the west coast.

Commercial fishing in Canada provides employment for some 87 300 fishermen and 44 536 plant workers in the fish processing industry. Many of these jobs are seasonal. The Atlantic fisheries are Canada's largest with 58 900 registered fishermen and an estimated 34 400 people seasonally employed in the processing sector. On the Pacific coast, 20 000 fishermen are employed in the fishing industry and an estimated 8 500 in fish-processing plants.

One of the key problems in the Canadian fisheries is significant overcapacity in the fish-processing sector, with 658 plants in the Atlantic fisheries and 125 plants on the Pacific coast. Overall capacity utilization was running at approximately 50 percent in 1992, and is lower in 1993, particularly in Atlantic Canada, due to the groundfish crisis. These figures highlight the need for rationalization and restructuring of this economic activity to ensure the industry's long-term viability.

Additional challenges facing the Canadian fisheries sector include:

- the impact of globalization — i.e., increasing competition from developing countries with low-wage structures, including Russia and China, requiring the Canadian fish and seafood sector to pursue strategic partnerships, alliances and investment opportunities to secure raw material for processing, and markets for Canadian products, particularly value-added products
- lower-priced competing proteins (i.e. chicken), whitefish substitutes, and the loss of cod markets in the U.S. to catfish, tilapia, hoki, Alaska pollock, hake, etc.
- process automation and design, the development and use of new packaging materials, and adaptation of biotechnology processes that will require scientists, fishermen, financiers, processors and

marketers to work closely together to provide a stronger base for enhancing Canada's trade performance

- a continuing need to heighten awareness among international consumers, institutions and retailers, that Canada has a consistently high-quality supply of both traditional, non-traditional, farmed and value-added fishery products
- the review of Canada's harvesting and fish inspection regulations to allow Canadian firms to operate in a competitive environment
- the difficulty of developing marketing plans for some non-traditional species in the absence of more certainty in resource forecasts, and the high cost of product and market development
- the over-reliance of Canadian industry, particularly on the west coast, on Japan which is the major frozen salmon market and the only market for salted herring roe
- slow progress on new product development due to tariff and non-tariff barriers on value-added seafood in many foreign markets.

There are several positive developments under way in the Canadian fisheries industry demonstrating an increasing innovation and competitiveness necessary to survive in the global marketplace. The west coast fisheries in particular have recorded some successes in adjusting to the emerging realities of the 1990s and beyond. For instance:

- joint ventures, technology exchanges and marketing arrangements with foreign firms in Japan, the U.S. and in European countries are increasing
- in an effort to maintain resource sustainability and increase competitiveness, considerable pre-competitive cooperation now exists in the field of product processing and post-processing technology (i.e. research into ozonation and wastewater treatment)

- the seafood trade in British Columbia is becoming more global in outlook, increasingly buying and marketing products of non-Canadian origin and exporting these products worldwide
- the west coast industry has been successful in increasing its penetration of the U.S. market and is actively looking to growth areas such as Latin America, including Mexico
- the establishment of the British Columbia Salmon Marketing Council and the involvement of primary producers in marketing issues are giving a new focus to quality and competitiveness at the producer level.

Proximity and ease of access to the U.S. market are a major advantage for Canadian exporters. Canada has also benefited from preferred access to the U.S. under the FTA. The FTA entered into effect on January 1, 1989, and involves the gradual removal of tariffs over a 10-year period.

The FTA also provides for the elimination of certain non-tariff barriers. However, Article 1203 permits Canada to continue to control the export of unprocessed fish under the provincial laws of Newfoundland, New Brunswick, Nova Scotia, Prince Edward Island and Quebec. There is still concern, however, that U.S. retaliatory measures could be directed against these controls as occurred in a similar case involving grandfathered export controls on Canadian west coast logs.

The Canadian industry also remains concerned over a seemingly unpredictable U.S. border inspection regime, particularly in shipments of fresh fish. To this end, work is continuing in the Technical Working Group on Fish and Fishery Products Inspection established under the FTA. Success has been achieved in determining equivalency in the action levels for assessment of the quality of frozen groundfish products. Technical exchanges are continuing, including the cross-border training of inspection staff and electronic interfacing of inspection databases.

Mexico has joined with Canada and the U.S. in concluding NAFTA which builds on the FTA. NAFTA took effect on January 1, 1994, and gives Canadian exporters preferential access to a market of 85 million people in Mexico. The average annual growth of the Mexican market for fish and shellfish is expected to be 3.5 percent, reaching \$1.4 billion in 1994.

NAFTA will eventually eliminate tariffs on Mexican imports of fishery products from Canada and the U.S. Immediate tariff elimination was negotiated for a number of species of interest to Canada, including Atlantic and Pacific salmon, crab, hake, herring, mackerel, haddock and dried smoked fish. In addition, tariffs will be phased out over five years for lobster, scallops, mussels, oysters, halibut and prepared and processed fish, and over 10 years on frozen fish fillets. Mexican import licences for lobster are no longer required.

Successful conclusion of the Uruguay Round of GATT negotiations will now improve Canadian market access in many countries, particularly in Japan where tariffs will be reduced by 30 percent, in the Republic of Korea where tariffs will decline to 10 to 20 percent and in the EC where groundfish tariffs on many items of interest to Canada will fall to the 7.5 to 12-percent range. Opportunities will also arise in developing country markets which have offered to reduce and bind tariffs in the 30-percent range.

Improvements for Canadian firms have also been realized in the case of market access to the EC. This is a result of recognition of Canada's fish-inspection system with its reliance on Quality Management Program (QMP) in 1993 as the competent Canadian authority for the inspection and certification of fishery products entering the EC. Canada is one of the first countries to receive such recognition.

This success has led to an exemption from the mandatory import inspection requirements implemented by the EC in January 1993, providing easier access for most Canadian fishery

products entering member states. Fishery products not currently covered by the derogation include trade in live molluscan shellfish products and live aquacultured products because of fish health and disease concerns. Efforts will be undertaken to conclude agreements in 1994 for these products to permit similar ease of access into the EC.

A series of Memoranda of Understanding (MOUs) has been concluded in the areas of inspection, certification, technical cooperation, trade and information exchanges. Such agreements are now in operation with Australia, Japan, Thailand, the Philippines and Iceland, and further MOUs are under development with Mexico and Ecuador.

Strategic Direction

- Establish strategic priorities
 - form a Seafood Industry Marketing Strategy (SIMS) Group to more effectively coordinate market research, funding and trade development activities among federal and provincial departments and agencies (DFAIT, DFO, WED, ACOA, AG CAN, CIDA)
 - continue to concentrate trade development activities on markets of the U.S., Japan and western Europe, and expand activities in Mexico, Australia, New Zealand, the Caribbean and the remainder of the Asia-Pacific region (DFAIT, DFO, WED, ACOA, AG CAN)
 - direct special trade development activities at market niches comprising the hotel, restaurant and institutional trade, including those in major tourist areas (DFAIT, DFO, WED, ACOA, AG CAN)
- Improve the delivery of market information and intelligence
 - improve the delivery of foreign market information and intelligence, with emphasis on market trends, access issues, distribution channels and business contacts (DFAIT, DFO)
 - produce Global Market Opportunity Reviews (GMORs) on lobster, salmon, traditional and non-traditional fish and seafood species (DFAIT)
 - build upon the recent launch of DFO's Aquafax Service by exploring the feasibility of an electronic bulletin board, fax on demand and other rapid communication services to improve the delivery of information (DFAIT, DFO)
- Diversify exports into more value-added and non-traditional products
 - promote viable non-traditional species through focused promotional events in the U.S. and other principal international markets (DFAIT, DFO, ACOA, WED, AG CAN)
- Enhance and defend market access
 - improve market access, particularly for further processed items, by seeking to remove such barriers as tariffs, tariff rate quotas, import quotas, health and phytosanitary restrictions, inspection matters and other non-tariff barriers, and by exercising Canada's rights under the GATT dispute settlement process; U.S. market access issues related to Listeria infections, parasite action levels, border inspection controls, and equivalency in inspection procedures will continue to be addressed in the FTA bilateral technical working group (DFO, DFAIT)

- manage the successful implementation of the EC derogation for veterinary certification for fish which took effect October 1, 1993 (DFAIT, DFO)
- explore possibilities for establishing bilateral agreements which enhance Canada's market access and industry competitiveness by developing separate MOUs with U.S. regulatory agencies (Food and Drug Administration, and National Marine and Fisheries Service) on recognition and inspection systems, grade and inspection marks based on equivalency between QMP and U.S. Hazard Analysis and Critical Control Points (HACCP) systems, and updating the 1948 Molluscan Shellfish Agreement (DFO, DFAIT)
- take a proactive role in the Codex Alimentarius Commission particularly the Codex Committee on Fish and Fishery products in simplifying fish product standards (DFO)
- continue to send Canadian experts to training courses organized by the Food and Agriculture Organization of the United Nations (FAO) and other international organizations as a means of promoting Canada's fish-inspection programs (DFO)
- Technology enhancement
 - enhance identification of foreign fish harvesting, processing, production and aquaculture technologies through increased use of Canada's Technology Development Officers abroad (DFAIT, DFO)
 - promote greater foreign investment and strategic partnering in the Canadian fisheries through the active assistance of Canada's network of investments officers abroad, particularly in Japan (DFAIT, DFO, Industry Canada, NRC, WED, ACOA)
- Raise the international profile of Canadian fish and seafood products
 - promote a distinctive image for Canadian seafood products internationally by achieving broader sector participation, particularly by provincial governments, in strategically selected international events, such as conferences, trade fairs and seafood shows and conferences, including major events like ANUGA, SIAL, the Tokyo Seafood Show, ANTAD, Seafare and the International Boston Seafood Show (DFAIT, DFO, WED, ACOA)
 - encourage financial self-reliance of associations through greater industry commitment, such as levies or check-offs to support generic marketing initiatives. (DFO, WED, ACOA, AG CAN)

References

- *Global Market Opportunity Reviews*
(Source: DFAIT)
Tel.: (613) 995-1713
 - Salmon
 - Fish and Seafood
 - Non-traditional Species
 - Lobster
 - Aquaculture
- *Guidelines for Canadian Fish Exporters*
(Source: DFAIT)
Tel.: (613) 995-1713
 - Austria, Denmark, Hong Kong, Italy, Mexico, the Netherlands, Singapore, the Republic of Korea, Spain, Switzerland, Taiwan, U.K., Egypt, Sweden, U.S. and Japan
- *Charting a New Course: Towards the Fishery of the Future: Task Force on Incomes and Adjustment*
(Source: DFO)
Tel.: (613) 993-0999

- *Aquaculture: A Guide to Canadian Government Programs*
(Source: DFO)
Tel.: (613) 993-2091
- *The Canadian Fishery: Waiting for GODOT*
(Source: A report prepared for the DFO by Strategico Inc.)
Tel.: (613) 993-2091
- *Ocean Opportunities for the West Coast of Canada*
(Source: Science Council of British Columbia)
Tel.: 1-800-665-7222
- *Seafood and Marine Products Industry Profiles*
(Source: Industry Canada)
Tel.: (613) 954-4500
 - Overview
 - East Coast
 - West Coast
 - Freshwater
 - Aquaculture
 - Fish Meal and Fish Oil

Contacts

Sectoral Liaison Secretariat
Department of Foreign Affairs and International Trade
Tel.: (613) 995-1713
Fax: (613) 943-1103

Marketing and Market Development
Department of Fisheries and Oceans
Tel.: (613) 993-2540
Fax: (613) 990-9574/990-9764

Aquaculture
Department of Fisheries and Oceans
Tel.: (613) 993-2091
Fax: (613) 993-7651

Inspection and Enforcement
Department of Fisheries and Oceans
Tel.: (613) 990-0144
Fax: (613) 993-4220

Fish and Seafood Products

Activity	Date	Location	Dept.	Contact
Africa and the Middle East				
Incoming Delegation to Atlantic Canada (Fisheries)	May 1994	Atlantic Canada*	DFAIT	(613) 944-7029
Incoming Fisheries Mission to Eastern Canada	Jul 1994	Cairo, Egypt	DFAIT	(613) 944-0396
In-Store Promotion of Canadian Food Products	Sep 1994	Kuwait*	DFAIT	(613) 944-6847
African Development Bank (AfDB) Mission Follow-up	Nov 1994	Washington, D.C.	DFAIT	(613) 944-6579
Asia Pacific South				
Aquaculture Mission to Canada from Australia	Jul 1994	Canada*	DFAIT	(613) 995-7662
Central/Eastern Europe and the Commonwealth of Independent States				
Outgoing Fisheries Mission to Moscow, St. Petersburg and Murmansk	Aug 1994	Moscow, Russia St. Petersburg, Russia Murmansk, Russia	DFAIT	(613) 996-6429
East Asia				
Seafood Recipe/Cooking Contest	Jul 1994	Taipei, Taiwan	DFAIT	(613) 995-8705
Fish/Seafood Buyers Incoming Mission	Aug 1994	Canada*	DFAIT	(613) 995-8705
World Fishing Exhibition	Aug 1994	Taipei, Taiwan	DFAIT	(613) 995-8705
Japan				
Generic Promotion Material	TBD*	Canada*	DFAIT	(613) 995-1677
Incoming Chefs to Alberta	May 1994	Alberta*	DFAIT	(613) 995-1677
Strategic Alliance Mission	May 1994	Japan*	DFAIT	(613) 995-1677
Incoming Seafood Chefs and Journalists	Jun 1994	British Columbia*	DFAIT	(613) 995-1677
Solo Seafood Show	Jun 1994	Osaka, Japan Fukuoka, Japan	DFAIT	(613) 995-1677
Tokyo International Seafood Show	Jun 1994	Tokyo, Japan	DFAIT	(613) 995-1677
Special Lobster and Salmon Promotion	Jul 1994	Osaka, Japan	DFAIT	(613) 995-1677
Northern Shrimp Outgoing Mission	Sep 1994	Japan*	DFAIT	(613) 995-1677
Latin America and the Caribbean				
Salon internacional del Empaque '94	TBD*	Caracas, Venezuela	DFAIT	(613) 996-5548
Fispa '94	Jun 1994	São Paulo, Brazil	DFAIT	(613) 996-5549
Pesca International '94	Jul 1994	Veracruz, Mexico	DFAIT	(613) 995-0460
Expo Pesca '94	Dec 1994	Santiago, Chile	DFAIT	(613) 996-4199

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
United States				
In-Store Promotion — Non-Traditional Seafood Treasures	May 1994	Detroit, Michigan	DFAIT	(613) 944-9474
Incoming Buyers to British Columbia	Jun 1994	British Columbia*	DFAIT	(613) 944-9474
Southeastern U.S. Market Study	Jun 1994	Atlanta, Georgia	DFAIT	(613) 944-9474
Incoming Buyers to Atlantic Canada	Aug 1994	Atlantic Canada*	DFAIT	(613) 944-9474
Ohio Market Introduction — Solo Event — Non-Traditional Fish Products	Aug 1994	Cincinnati, Ohio	DFAIT	(613) 944-9474
Seafare International Information Booth	Sep 1994	Los Angeles, California	DFAIT	(613) 944-9474
Solo Seafood Show Livoni, Michigan	Sep 1994	Detroit, Michigan	DFAIT	(613) 944-9474
Outgoing Mission to New York	Nov 1994	New York*	DFAIT	(613) 944-9474
Solo Food and Beverage Show	Dec 1994	Miami, Florida	DFAIT	(613) 944-9474
Non-Traditional Seafood Treasures Demonstration for Buyers	Feb 1995	Detroit, Michigan	DFAIT	(613) 944-9474
International Boston Seafood Show	Mar 1995	Boston, Massachusetts	DFAIT	(613) 944-9474
Western Europe and European Community				
European Seafood Exhibition	Apr 1994	Brussels, Belgium	DFAIT	(613) 996-2147
Outgoing Aquaculture Mission	May 1994	Silkeborg, Denmark TBD*	DFAIT	(613) 995-4730
CIBUS (Agri Food)	May 1994	Parma, Italy	DFAIT	(613) 996-2147
Fish and Fish Products Mission	Jun 1994	British Columbia*	DFAIT	(613) 995-9766
Fish Buyers Mission to Canada	Jun 1994	Canada*	DFAIT	(613) 995-6565
NEXOS (New Exporters to Overseas Markets) Mission to International Marine Biotech Conference	Aug 1994	Troms, Norway	DFAIT	(613) 995-4730
NEXOS Mission to NOR-Fishing '94	Aug 1994	Trondheim, Norway Denmark*	DFAIT	(613) 995-4730
Canadian Food Festival (Fine Foods)	Oct 1994	Brussels, Belgium	DFAIT	(613) 995-6440
Fisheries Mission to Canada from Madrid, Spain	Oct 1994	Canada*	DFAIT	(613) 996-7544

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 - Plastics and Polymer Products
9. Consumer Products
 - Apparel Industry
 - Business and Institutional Furniture
 - Footwear
 - Hardware and Housewares
 - Household Furniture
 - Sporting Goods (including recreational watercraft)
 - Textiles
10. Defence and Related Products
 - Aviation, Marine and Defence Electronics
 - Marine and Land Defence Systems
11. Electrical and Energy Equipment
 - Electrical Equipment
 - Oil and Gas Field Equipment
12. Environmental Industries
13. Fish and Seafood Products
14. Forest Industries
15. Industrial Technologies
 - Agricultural Technology, Machinery and Equipment
 - Mining — Forestry — Pulp and Paper
 - Ocean and Marine Shipboard Technology
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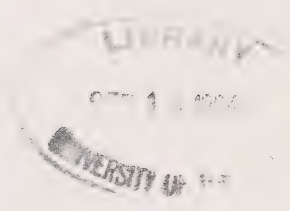
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Aussi disponible en français sous le titre Industrie forestière.



Forest Industries

The forest products sector is composed of two major industry groups: paper and allied industries and wood industries.

The paper and allied industries group is made up of two distinct segments: pulp and paper (e.g. market pulp, newsprint, fine papers) and converted paper products (e.g. packaging, coated papers, tissue products).

The wood industries group consists of two segments: commodity products (e.g. softwood and hardwood lumber and plywood, oriented strandboard, particleboard, miscellaneous panelboard products) and value-added wood products (e.g. kitchen cabinets, windows, doors, manufactured housing and their various components).

International Environment

The industry is cyclical in nature, and except for softwood lumber, fell into a downcycle in 1992 due to worldwide overcapacity and reduced consumption. World demand is expected to grow

over the remainder of the 1990s, although at a slower rate than during the 1970s and 1980s.

Several factors have an important impact on the competitive position of the industry internationally:

- environmental issues which represent a major challenge, particularly for the pulp and paper sector
- concerns over waste management, effluent emissions, recycling, land-use policy, forest management practices, and chlorine bleaching of pulp and paper
- recycled paper content requirements in the U.S. and chlorine bleaching requirements in Germany which present important marketing challenges; some Nordic producers are particularly well-placed to meet the environmental preferences of more demanding customers, such as Germany for example, where totally chlorine-free (TCF) pulp is preferred.

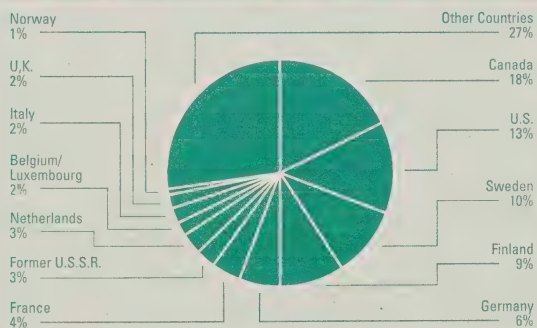
Growing competition can also be expected from new competitors in non-traditional producing areas. For example:

- the emerging importance of Brazilian, Chilean and Indonesian pulp producers
- a U.S. company's recent announcement of its intention to construct two oriented structural board (OSB) mills in Venezuela.

Changes occurring in eastern Europe, however, may over the long term create both added competition in Europe and new market opportunities for Canadian exports. NAFTA, which was implemented on January 1, 1994, is expected to spell new opportunities, particularly in Mexico.

Canada is the world's largest exporter of manufactured forest products. In 1990, its share

Figure 1 — World Exporters of Forest Products, 1990 (%)



Total = US\$98.6 billion.

Source: Food and Agriculture Organization of the United Nations, 1991 Yearbook of Forest Products, compiled by Natural Resources Canada — Canadian Forestry Services.

of the world market was 18 percent, followed by the U.S. at 13 percent, Sweden 10 percent and Finland 9 percent. The industry is heavily oriented to the production of commodities, which account for about 80 percent of total exports (e.g. market pulp, newsprint, softwood lumber). For the industry to maintain and increase its market share globally, one long-term objective should be to accelerate the shift to higher-value engineered components and final products. World data for 1990 are shown in Figure 1.

Canadian Position

In 1992, the paper and allied industries group exported shipments valued at \$13.1 billion (67 percent of total shipments), and the wood industries group exported shipments valued at \$8.3 billion (55 percent of total shipments).

The U.S. is Canada's most important export market, traditionally accounting for some 65 percent of the value of export shipments. It will continue as the industry's major export market for newsprint, market pulp and softwood lumber. Market potential is linked directly to Canada's ability to compete with U.S. domestic producers.

The EC and Japan follow, accounting for roughly 16 percent and 10 percent respectively of total exports. Exports of Canadian forest products to the EC are expected to remain steady for the remainder of the 1990s and there is scope for market diversification in a range of value-added products.

Japan, the world's largest net importer of solid wood products, is Canada's second-largest single country market for forest products, after the U.S. The recent approval of new product standards for structural board and lumber products, and the acceptance in the Japanese building code of three-story wooden buildings in prescribed areas, offer enhanced export opportunities for commodity and value-added wood products. There is scope for growth in this market during the remainder of the 1990s and into the next century.

Export opportunities are also emerging in other Pacific Rim countries, in Mexico, and in selected African and Middle East countries.

The forest products industry is largely Canadian-owned and consists of over 4 300 establishments spread across the country. In 1992, it generated \$36 billion in shipments with exports of \$22 billion and imports of \$3 billion. This trade surplus of over \$19 billion makes it the single largest contributor to Canada's favourable balance of trade.

The industry is a major economic force in all regions of the country. It represents about 47 percent of manufacturing in British Columbia, 19 percent in Atlantic Canada, 15 percent in Quebec, 11 percent in the Prairie provinces and 8 percent in Ontario. In about 350 communities, the industry is the major (or sole) employer.

While Canada enjoys competitive advantages in this sector, a number of problems and weaknesses have become apparent.

- Traditionally, Canada's trade position in commodity forest products was built on the competitive advantage provided by an abundant, accessible, high-quality forest resource and low-cost energy. Most of the harvest continues to be from natural forests. However, the forest industry in several regions of Canada is now operating at the upper limit of economic wood supply and must increasingly rely on more distant, higher-cost and sometimes lower-quality forests at the same time as it is required to replant and manage harvested areas.
- The negotiation of international agreements to address environmental issues of global concern is an area of recent importance.
- A key factor in the economic growth and vitality of this sector will be the preservation of a positive international image for Canadian forest products. In addition, cyclical excesses or shortages of capacity, demand shifts to new products, competition from new sources with low labour and

wood costs, and significant green-consumer protectionist pressures in major markets, will also challenge the industry into the 21st century.

- Questions of market access remain extremely important and have a significant impact on Canadian competitiveness and future prospects. Canadian softwood lumber currently faces trade restrictions (including codes and standards and other non-tariff barriers) in some traditional markets. For example, in 1992 the U.S. imposed a countervailing duty of 6.51 percent on softwood lumber imported from Canada, claiming unfair government subsidization and injury to U.S. producers.
- In Europe, new regulations have been introduced due to a perceived risk of pinewood nematode infestation in softwood lumber. Canadian newsprint enters the EC under a duty-free quota. Exports over the quota are subject to a 9-percent duty and tend to distort and disrupt trade of Canadian newsprint relative to duty-free newsprint from Sweden and Finland.
- Similarly, Canadian softwood plywood enters the EC under a GATT-bound duty-free quota. Forest products outside the quota are subject to a 10-percent duty.
- Restrictions (e.g. higher tariffs than on comparable foreign softwoods) face Canadian spruce/pine/fir lumber entering Japan.

From a market perspective, long-term trade opportunities for the forest products industry are substantial. Although global demand for softwood lumber is not expected to keep pace with global GNP, demand for composite wood panels, engineered and further-value-added wood products will be strong. For the pulp and paper industry, increasing our global market share will in part be dependent on the development of new products and markets.

Considering the current financial restraints within which governments are operating, a cooperative approach is required to ensure the most cost-effective use of funding for existing marketing development programs.

Strategic Direction

- Enhance Canada's image abroad as a leader in environmentally friendly forest products, based on a renewable resource and recyclable products.
 - Support the communication strategy to portray accurately Canadian forest management practices so as to counteract misinformation, primarily in the European market, that could seriously harm Canadian forest products exports. (DFAIT, NR-CFS)
 - Support association offices, in collaboration with Canadian embassies and officers abroad, by developing appropriate promotional materials to encourage a favourable image of Canadian forest management practices. (DFAIT, Posts, Industry Canada, NR-CFS)
- Work to eliminate tariff and non-tariff barriers to forest products exports worldwide. Improve market access.
 - Negotiate the elimination of tariff and non-tariff barriers to forest products exports worldwide through the GATT.
 - Improve coordination of market-access issues and negotiations dealing with multilateral and bilateral trade.
 - Pursue opportunities arising from NAFTA to establish a presence in the Mexican market. (DFAIT, Industry Canada)

- Protect existing market access from environmental trade barriers (e.g. recycle regulations, eco-taxes and labels). (DFAIT)
- Promote greater scientific cooperation between Canada and other countries.
 - Organize incoming and outgoing missions, speaking tours and scientific exchanges to Europe, Scandinavia and the U.S. to address issues and to explore new technical solutions in the pulp and paper sector, including converted paper products. (DFAIT, Industry Canada, NR-CFS)
 - Support independent organizations, such as the CSA and ISO, as potential candidates to set up a certification program to assist consumers in identifying forest products that come from sustainably managed forests.
- Improve ties with industry and industry associations (e.g. Structural Board Association, Canadian Manufactured Housing Institute, Council of Forest Industries of British Columbia, Bureau de promotion des industries du bois, Canadian Pulp and Paper Association [CPPA]).
 - Encourage industry associations to disseminate product information and market intelligence and to expand export readiness training. (DFAIT, Industry Canada)
 - Support industry associations in long-term export marketing strategies and activities and strengthen their trade development activities through the Cooperative Overseas Market Development Programme (COMDP) and the Cooperative Industrial Market and Development Program (CIMDP). (DFAIT, Industry Canada, provincial governments)
- Support the environmental issues activities of the CPPA office in Brussels. (DFAIT, Industry Canada, NR-CFS)
- Market development
 - Support the recent establishment and expand the activities of the Forests Industries Marketing Strategy (FIMS) group to coordinate government funding for international marketing activities by associations in this sector. (DFAIT, Industry Canada, provincial governments)
 - Support the process of exploring the potential integration of international marketing efforts and rationalize support of overseas offices through the coordination and execution of forest industries programs under one industry umbrella organization to offshore markets. (DFAIT, Industry Canada, provincial governments)
 - Develop a Canadian Building Products Export Council (CBPEC) to encourage the development of new sectoral export marketing strategies. (Industry Canada)
 - Support tripartite efforts, like CIMDP-Western Canada, for value-added wood products and establish a similar CIMDP program in eastern Canada. Encourage the proposed Wood Panel Export Market Development Program to assist firms to expand and diversify markets. (DFAIT, Industry Canada, provincial governments)
- Expand opportunities within priority markets and promote priority products and technologies.
 - Focus existing market intelligence and trade development activities on priority markets such as the U.S., Europe, Japan, other Pacific Rim countries, Mexico and the Middle East. (DFAIT, Industry Canada)

- Build on key Canadian technologies and products including timber-frame construction and related building products such as lumber, plywood and oriented strandboard, higher-value-added building products and fine papers. (DFAIT, Industry Canada)
- Emphasize promotion of wood-frame demonstration housing construction to export markets, as a vehicle to increase sales of related building products and materials. (DFAIT, Industry Canada)
- Develop a strategy and supporting documentation to promote Canadian forestry and forest management systems, expertise, technology and equipment. (NR-CFS)
- Improve federal-provincial cooperation in international marketing by increasing the use of the Federal-Provincial Forest Industries Development Committee (FIDC) as a vehicle for dissemination of market information. (DFAIT, Industry Canada, provincial governments)

Contacts

Planning and Operations Bureau
Department of Foreign Affairs and
International Trade
Tel.: (613) 996-4209
Fax: (613) 943-1103

Forest Industries Branch
Industry Canada
Tel.: (613) 954-3037
Fax: (613) 941-8048

Forest Industries

Activity	Date	Location	Dept.	Contact
Africa and the Middle East				
Outgoing Trading Houses to North Africa/Middle East (Forestry)	Oct 1994	Alexandria, Egypt Cairo, Egypt Middle East*	DFAIT	(613) 944-0396
East Asia				
IBEX '94	Jun 1994	Hong Kong	DFAIT	(613) 945-6962
Log Home Incoming Buyers Mission from Taiwan	Jun 1994	Canada*	DFAIT	(613) 996-7582
Incoming Pulp & Paper Mission from Taiwan	Aug 1994	Canada*	DFAIT	(613) 996-7582
Canadian Lumber Seminar	Oct 1994	Taipei, Taiwan	DFAIT	(613) 996-7582
Japan				
3-Story Apartment Video Project	TBD*	Japan*	DFAIT	(613) 995-1678
Latin America and the Caribbean				
Summit '94 (Wood Expo)	Sep 1994	Vancouver, B.C. Toronto, Ontario Montreal, Quebec Edmonton, Alberta	DFAIT	(613) 996-4199
United States				
Kitchen and Bath Show	Apr 1994	Chicago, Illinois	DFAIT	(613) 944-7486
Incoming Mission of Home Depot Buyers	May 1994	Toronto, Ontario	DFAIT	(613) 944-7486
Pacific Coast Builders Show	Jun 1994	San Francisco, California	DFAIT	(613) 944-7486
Remodelers Show	Oct 1994	Atlanta, Georgia	DFAIT	(613) 944-7486
Incoming Mission from New York to Canadian Door and Window Industry	Dec 1994	Ontario* Quebec*	DFAIT	(613) 944-7486
National Association of Homebuilders, Trade Fair	Jan 1995	Houston, Texas	DFAIT	(613) 944-7486

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
Western Europe and European Community				
Incoming Value-Added Wood Products Mission — Eastern	May 1994	Eastern Canada*	DFAIT	(613) 995-6565
Outgoing Mission to Iceland	May 1994	Reykjavik, Iceland	DFAIT	(613) 995-4730
Outgoing Hardwood Mission	Jun 1994	Netherlands* Belgium*	DFAIT	(613) 995-6440
Interforst (Forestry, TimberTech)	Jul 1994	Munich, Germany	DFAIT	(613) 943-0611
Wood Building Products (NEXOS) Mission to Building '94	Sep 1994	Istanbul, Turkey Ankara, Turkey	DFAIT	(613) 996-5263
New Exporters to Overseas Markets (NEXOS) Mission (Forest Products)	Oct 1994	Bologna, Italy — SAIE 94	DFAIT	(613) 995-9766
Bouwbeurs '95	Jan 1995	Utrecht, Netherlands	DFAIT	(613) 995-6440
Batibouw '95	Jun 1995	Brussels, Belgium	DFAIT	(613) 995-6440

* Exact dates and/or cities to be determined.



Canada's International Trade Business Plan is made up of three key components: a Strategic Overview, a series of industry sector strategies, and an accompanying series of international activities lists. Industry sectors available include:

1. Advanced Manufacturing Technologies
2. Aeronautics
3. Agri-Food Products
4. Arts and Cultural Industries
5. Automotive
6. Biotechnologies
7. Business and Professional Services
8. Chemicals and Plastics
 - Chemicals and Petrochemicals
 - Plastics and Polymer Products
9. Consumer Products
 - Apparel Industry
 - Business and Institutional Furniture
 - Footwear
 - Hardware and Housewares
 - Household Furniture
 - Sporting Goods (including recreational watercraft)
 - Textiles
10. Defence and Related Products
 - Aviation, Marine and Defence Electronics
 - Marine and Land Defence Systems
11. Electrical and Energy Equipment
 - Electrical Equipment
 - Oil and Gas Field Equipment
12. Environmental Industries
13. Fish and Seafood Products
14. Forest Industries
15. Industrial Technologies
 - Agricultural Technology, Machinery and Equipment
 - Mining — Forestry — Pulp and Paper
 - Ocean and Marine Shipboard Technology
16. Information Technologies
17. Medical and Health-care Products
18. Minerals, Metals, Advanced Materials and Construction Products
19. Space
20. Tourism
21. Urban Transit and Rail

For information on how to receive the Strategic Overview, or additional industry sector strategies and international activities lists, please call: **1-800-267-8376**



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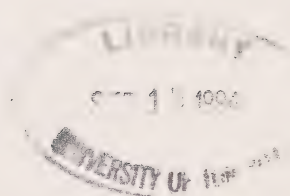
Canada's International Trade Business Plan

1994-1995

***An Integrated Plan for Trade, Investment
and Technology Development***



Doing Business Abroad



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Agricultural Technology, Machinery and Equipment

The agricultural technology, machinery and equipment sector includes manufacturers of livestock-raising equipment and tractors, implements and machines that are designed for growing, storing, moving and primary processing of agricultural crops.

International Environment

The market for farm machinery has become increasingly international as manufacturers strive to reduce costs with large-scale manufacturing to serve worldwide requirements. For example, tractor production is largely located in three different regions (i.e. Japan, the EC and North America), each of which specializes in a particular size of tractor sold throughout the world. Tractors with less than 40 horsepower are made in Japan; those with 40 to 100 horsepower are predominantly manufactured in the EC; and tractors in excess of 100 horsepower are made in North America.

The bulk of the manufacturing is done in the U.S., the U.K., Germany, France, Japan and Canada. The world market is divided into three roughly equal parts — the EC, North America and the rest of the world.

The following trends are altering the nature of the global market for farm machinery:

- the increasing production of cereal grains by traditional importers (In countries such as Saudi Arabia and China, this shift has resulted not only in these countries becoming net exporters of cereal grains, rather than importers, but also good markets for farm machinery.)
- the privatization of farming in eastern Europe and the republics of the former U.S.S.R., opening a major new market for farm machinery producers in the western world
- the decreasing number of farmers and the increasing size of farms in North America
- the development of regional trading blocs (particularly NAFTA and the EC), coupled with the trade liberalization of farm machinery trade announced at the Group of Seven (G-7) meeting in Tokyo, which

requires a rejuvenated marketing approach to maximize opportunities resulting from standardized regulations and tariff reductions.

Canadian Position

The Canadian agricultural machinery industry encompasses a wide range of farm machinery including two-wheel and four-wheel drive tractors, combine harvesters, seeding and tillage equipment, hay-handling and harvesting equipment, and grain-handling and storage equipment. Over the years, the Canadian industry has successfully developed specialized machinery for the production of cereal grains on large farms under dryland farming conditions. In addition, certain "short-line" firms produce specialized equipment for particular crops (e.g. tobacco, potatoes, sugar beets and ginseng).

Total industry employment in 1989 was approximately 10 100 people working in 246 establishments. Total factory shipments exceeded \$1 billion in 1990. Exports amounted to about two thirds of total shipments, with the U.S. receiving 91 percent of total exports.

The trend to internationalism offers an opportunity to western Canadian farm machinery manufacturers as Canadian dryland farming technology is at the leading edge and in demand in all the major countries growing cereal grains under large-scale dryland farming conditions. Canada has the potential to be the world-recognized source for large-scale dryland farm machinery and technology in the next decade.

Canada, with exports of \$756.5 million, accounts for 5 percent of world trade in farm machinery. The U.S. will continue to be Canada's largest market, but substantial opportunities for growth exist in Australia, Mexico, the EC, China, Russia, Ukraine and Kazakhstan.

The industry's principal strength is in the economies of scale that have resulted from favourable access to the U.S. market. The free trade environment in existence for more than 40 years has ensured that the Canadian industry has access to a market large enough to permit Canadian producers to exploit economies of scale where appropriate.

Strategic Direction

The overall goal of the international strategy is to increase the number of Canadian companies exporting by 50 percent in five years. To achieve this goal, elements of the strategy must include market studies and targeted trade fairs and missions that will:

- continue active pursuit of the U.S. as Canada's main market, particularly for companies new to international trade
- take advantage of the opportunities in Mexico created by NAFTA
- target the CIS (especially Ukraine, Kazakhstan and Russia) and the former Council for Mutual Economic Assistance (COMECON) countries (particularly Poland, the Czech Republic and Slovakia) as the prime development market for Canadian dryland farming technology
- develop investment and strategic alliances for technology exchange and diffusion to exploit the opportunities presented by the changing market regime of the EC; particular opportunities will be pursued that result from the creation of a unified Germany and the tariff reductions announced at the G-7 meeting in Tokyo; investigations will also focus on sources of inventory financing and reciprocal testing of machines for local market acceptance
- strengthen coordinated marketing approach with the Prairie Implement Manufacturers Association (PIMA), the Association of Agricultural Equipment Manufacturers of Quebec (AFMAQ), the Ontario Farm Equipment Manufacturers Association

(OFEMA), as well as provincial agencies, to expand marketing and technological exchanges to revitalize export market development for Canadian short-line farm machinery manufacturers

- focus market development support in China on large-scale grain harvesting, storage and processing equipment in the Heilongjiang province
- reactivate market development program for Canadian dryland farming technology in Australia
- continue market development for specialized cereal grain equipment in Saudi Arabia, Iran, Jordan, Sudan and the Magreb countries of North Africa
- encourage special crop equipment manufacturers (potato equipment manufacturers in New Brunswick and Prince Edward Island, tobacco equipment manufacturers in Ontario and orchard equipment manufacturers in British Columbia and Ontario) to increase marketing initiatives, such as individual visits, trade fairs and missions to targeted regions and countries with sales growth potential
- encourage the industry associations (particularly PIMA and OFEMA) to serve as channels for market information by making them a central source of data through direct participation in market information development
- assist companies and their associations to develop focused strategies that reflect company and sector strengths and market opportunities by involving them directly in the government's trade promotion process.

Contact

Industrial Technologies Directorate
Manufacturing and Processing
Technologies Branch
Industry Canada
Tel.: (613) 954-3226
Fax: (613) 941-2463

Mining — Forestry — Pulp and Paper

This sector group includes suppliers of equipment and associated technologies used by the natural resource industries of mining, forestry, and pulp and paper. The international arena for resource equipment is dominated by multinational companies based in Scandinavia, Germany and the U.S.

International Environment

Growing environmental regulations, coupled with lower commodity prices and recessionary pressures, are forcing resource companies to become more cost-conscious. These trends are creating a greater demand for better equipment and newer technologies that are both cost-effective and environmentally acceptable. For example, in order to comply with environmental regulations, many international mining and forestry companies operating in industrialized countries must purchase safer equipment for extracting and processing natural resources and recycling by-products. Similar regulations are expected to take hold in developing countries over the next few years.

Internationally, mining companies are encouraging the development of equipment that incorporates advanced technologies. The objective of these companies is to attain fully automated mining operations, thereby reducing the labour required and improving the safety of underground operations. Forestry companies are aggressively pursuing the upgrading of equipment through technologies designed to improve productivity. The pulp and paper sector is also stressing cost savings and environmental issues.

Canadian Position

Canadian resource equipment manufacturers can be divided into two categories: smaller, Canadian-owned firms producing specialized products for niche markets and larger multinational companies, often foreign-owned.

In general, Canada's resource equipment sector has concentrated on the development of cost-effective, environmentally acceptable processes and techniques and has begun to develop specialized, high-quality, custom-engineered equipment.

The mining equipment sector produces a full range of exploration, mining and ore-processing equipment and is supported by engineering and service companies. The majority of the firms in this sector are Canadian-owned, small and medium-sized enterprises. Shipments in 1990 totalled \$374 million of which \$183 million was exported. Of a domestic market of \$607 million, the Canadian industry supplied \$191 million, resulting in an import penetration of \$452 million. A significant opportunity exists to replace these imports.

The forestry equipment sector produces equipment for both harvesting and sawmill operations and had shipments in 1990 of \$303 million of which \$221 million was exported. Most of the companies in this sector are small, producing specialized equipment for niche market applications.

The pulp and paper equipment sector had shipments totalling \$438 million in 1990 of which \$189 million was exported. Some of the major companies in this sector have extensive process and machinery capabilities and supply complete systems.

The demand for resource equipment is weakening domestically. It is therefore essential that the resource equipment firms intensify their search for export markets. The U.S., Australia, New Zealand, Chile, northern Europe and Asia represent important markets. Certain markets, such as the CIS and some South American countries, present opportunities for system or turnkey solutions for each of these three industry sectors. In some cases, these types of opportunities may require innovative approaches; for example, countertrade measures or industry collaborations, such as strategic alliances or joint ventures, to secure a sale.

Strategic Direction

- Target Europe, the CIS, North America and Australia for sophisticated equipment that uses advanced technologies to provide a degree of automated operation. These countries prefer this equipment for its quality and innovation and for its design for users who are trying to reduce the labour component of their operations, where environmental issues are also predominant.
- Focus more attention, especially on conventional equipment manufacturers, to develop market opportunities in resource-rich regions, such as South America, Central Africa and east and Southeast Asia, where natural resource development is a priority.
- Encourage the smaller, technology-rich companies in the resource equipment sector, especially those in the mining and forestry sectors, to develop and strengthen their relationships with the original equipment manufacturers and with their more traditional customers — the resource companies — through alliances, consortia and joint ventures.
- Encourage associations, such as the Machinery and Equipment Manufacturers' Association of Canada (MEMAC) to promote consortia and networking among member firms for those market opportunities requiring a turnkey or integrated systems approach. One example of this type of initiative in the forestry sector is the recent formation of the Western Canadian Wood Machinery and Services Export Association. For the mining sector, the Canadian Association of Mining Equipment and Services for Export (CAMESE) is expected to play an important role in the export promotion of a full range of equipment and services.
- Promote the formation of networks and encourage them to establish working relationships with agencies such as the EDC, as the ability to raise export financing to

compete for major international contracts is an important consideration.

- Organize major international trade shows and carefully orchestrate incoming and outgoing trade missions to present Canadian capabilities abroad. DFAIT, with support from Industry Canada, will play a key role in these initiatives.

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Industry, Science and Technology Canada

Contact

Industrial Technologies Directorate
Manufacturing and Processing
Technologies Branch
Industry Canada
Tel.: (613) 954-3398
Fax: (613) 941-2463

Ocean and Marine Shipboard Technology

The ocean and marine shipboard technology sector includes suppliers of low-volume/high-value, custom-engineered products and services for use in, on and beneath the oceans.

International Environment

The major competition comes from the U.S., France, Germany, Norway and the U.K.

The traditional markets for these supplier firms have been the offshore oil and gas, marine science, marine defence and shipbuilding industries. Each of these markets has experienced declines over the past few years due to various economic factors such as depressed oil prices, global recession and East/West détente.

New markets are emerging, however. Internationally, there is a growing environmental awareness that is fostering regulatory regimes which are in turn creating new market opportunities for companies in this sector. In the EC, for example, regulatory directives and the implementation of the polluter-pay principle, have imposed requirements on EC member states that should result in substantial new business opportunities.

New markets are also emerging as a result of the obligations imposed on countries that have laid claim to their offshore regions as exclusive economic zones (EEZs). Countries claiming these zones are obligated to manage them in accordance with United Nations requirements. The diverse needs to manage these EEZs should provide both niche and turnkey business opportunities. A large number of the EEZs are in the Pacific Ocean region, associated with island states in such areas as Micronesia, Melanesia, parts of Asia and Australia.

International Financial Institutions (IFIs) such as the World Bank, Asia Development Bank, etc., are likely to be important players in the markets emerging both from environmental concerns and the obligations of ownership of EEZs.

Diverse opportunities exist in the CIS and other east European countries. The use of barter and other forms of countertrade in these markets

is common, and innovative approaches are often needed to secure a sale.

Canadian Position

The Canadian firms in the ocean and marine equipment and technology fields are generally small and Canadian-owned, with entrepreneurial and advanced technical capabilities.

- Approximately 500 firms are active in the sector and annual sales are about \$1 billion. There is representation across the country with clusters of specific activity in British Columbia and Atlantic Canada.
- Areas of recognized capabilities include hydrographic and oceanographic instrumentation, subsea robotics and remotely operated vehicles, remote-sensing systems, navigation and communication systems and "smart ship" technology.
- The traditional domestic markets for firms in this sector, i.e., offshore oil and gas, marine science, marine defence and shipbuilding, have declined appreciably over the past few years. However, many of the companies are suppliers to niche markets and have been highly successful internationally in this role.
- The markets emerging from environmental concerns and EEZs may offer a "Team Canada" or turnkey approach, as well as present niche opportunities to the industry in Canada. Companies should not be adverse to collaborating with other Canadian or foreign firms to exploit these markets.
- Some firms are already recognizing the need for innovative market approaches. A Burlington, Ontario-based firm is beginning to rely on countertrade measures to secure sales for its marine bearings in

the cash-poor CIS. A company in Sidney, British Columbia, and a firm in Calgary, Alberta, collaborated successfully to obtain a significant remote-sensing contract in the U.K. Another firm in Sidney, British Columbia, plans to establish a joint venture in India to enhance its sales in the Indian market.

Strategic Direction

Industry networks are expected to be established on the east and west coasts through support mechanisms such as the Advanced Manufacturing Technologies Initiative (AMTI) and the Canadian Business Networks Coalition (a Canadian Chamber of Commerce-led initiative). These networks, along with industry associations and government agencies such as Industry Canada, DFO and DFAIT, will be used to disseminate strategic market and industry intelligence to:

- encourage companies to seek new markets such as those emerging opportunities arising from environmental regulatory requirements
- promote alliances and other collaborative measures that will be needed to meet new business opportunities, such as turnkey contracts, arising from the creation of EEZs
- encourage the use of countertrade initiatives for exploiting the CIS and eastern Europe markets, especially those initiatives that incorporate innovative marketing and collaborative approaches

- foster closer working liaisons with such IFIs as the World Bank, the Asia Development Bank, the African Development Bank and the European Bank for Reconstruction and Development
- promote participation in major international trade shows and conferences, along with carefully organized incoming and outgoing trade missions.

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Drewry Shipping Consultants Ltd.
April 1992

Contact

Industrial Technologies Directorate
Manufacturing and Processing
Technologies Branch
Industry Canada
Tel.: (613) 954-3428
Fax: (613) 941-2463

Industrial Technologies

Activity	Date	Location	Dept.	Contact
Africa and the Middle East				
Incoming Mining Mission	TBD*	Canada*	DFAIT	(613) 944-5997
Iranconmin '94	Apr 1994	Tehran, Iran	DFAIT	(613) 944-7029
Mining Mission (Equipment and Services)	Sep 1994	Ghana* and/or Namibia*	DFAIT	(613) 944-5997
Outgoing Mining Mission	Mar 1995	Jordan* Syria*	DFAIT	(613) 944-6994
Asia Pacific South				
EMEX '94 (Machinery Show)	May 1994	New Zealand*	DFAIT	(613) 996-1052
Wamex Info Booth	May 1994	Perth, Australia	DFAIT	(613) 996-1052
Asia Pacific Mining	Oct 1994	Jakarta, Indonesia	DFAIT	(613) 996-7256
Goldfields	Oct 1994	Sydney, Australia	DFAIT	(613) 996-1052
Mine & Quarry	Oct 1994	Jingleton, Australia	DFAIT	(613) 996-1052
Industrial Machinery Mission	Nov 1994	Canada*	DFAIT	(613) 996-7256
Mining Show — Equipment	Dec 1994	Manila, Philippines	DFAIT	(613) 995-7659
Central/Eastern Europe and the Commonwealth of Independent States				
Canadian Technical Mission to Russia on Industry Standards Conversion, April 4-8, 1994	Apr 1994	Moscow, Russia	Industry Canada	(613) 954-3428
"Transtec 94" — The International Exhibition of Transport Industries with Russia and the Republics	Sep 1994	CIS* St. Petersburg, Russia	Industry Canada	(613) 954-3428
East Asia				
Outgoing Technical Mission	May 1994	Taiwan* China*	Industry Canada	(613) 954-3398
Latin America and the Caribbean				
Expomin '94	May 1994	Santiago, Chile Lima, Peru Buenos Aires, Argentina Belo Horizonte, Brazil	DFAIT	(613) 996-5358
Bogota International Fair '94	Jul 1994	Bogota, Colombia	DFAIT	(613) 996-5548
Summit '94 (Wood Expo)	Sep 1994	Vancouver, B.C. Toronto, Ontario Montreal, Quebec Edmonton, Alberta	DFAIT	(613) 996-4199

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
Venezuelan Gold Symposium '94	Oct 1994	Caracas, Venezuela	DFAIT	(613) 996-5548
Mining Equipment/Services to Mexico	Dec 1994	Mexico*	DFAIT	(613) 996-8625
Technology Mission to Mexico Mining Technologies and Equipment	Dec 1994	Mexico City, Mexico	Industry Canada	(613) 954-7812
Multiple Markets				
Business Opportunities Seminars	May 1994	Vancouver, B.C. Edmonton, Alberta Winnipeg, Manitoba Toronto, Ontario Montreal, Quebec Halifax, Nova Scotia	DFAIT	(613) 996-6188
United States				
Powder & Bulk Solids Conference/Exposition	May 1994	Chicago, Illinois	DFAIT	(613) 944-9475
Workshop for New Exporters	Jun 1994	Toronto, Ontario	DFAIT	(613) 944-9475
Outgoing Mission to Minneapolis and Denver	Oct 1994	Minneapolis, Minnesota Denver, Colorado	DFAIT	(613) 944-9475
International Workboat Show	Nov 1994	New Orleans, Louisiana	Industry Canada	(613) 954-3428
National Farm Machinery Show	Feb 1995	Detroit, Michigan	DFAIT	(613) 944-5149
Western Europe and European Community				
Oceans '94/OSATES Conference and Exhibition	Sep 1994	Brest, France	DFAIT	(613) 996-2363
Incoming Buyers and Technical Mission from Southern Europe and Mediterranean Region	Sep 1994	Halifax, Nova Scotia	Industry Canada	(902) 426-9475

* Exact dates and/or cities to be determined.



Canada's International Trade Business Plan is made up of three key components: a Strategic Overview, a series of industry sector strategies, and an accompanying series of international activities lists. Industry sectors available include:

1. Advanced Manufacturing Technologies
2. Aeronautics
3. Agri-Food Products
4. Arts and Cultural Industries
5. Automotive
6. Biotechnologies
7. Business and Professional Services
8. Chemicals and Plastics
 - Chemicals and Petrochemicals
 - Plastics and Polymer Products
9. Consumer Products
 - Apparel Industry
 - Business and Institutional Furniture
 - Footwear
 - Hardware and Housewares
 - Household Furniture
 - Sporting Goods (including recreational watercraft)
 - Textiles
10. Defence and Related Products
 - Aviation, Marine and Defence Electronics
 - Marine and Land Defence Systems
11. Electrical and Energy Equipment
 - Electrical Equipment
 - Oil and Gas Field Equipment
12. Environmental Industries
13. Fish and Seafood Products
14. Forest Industries
15. Industrial Technologies
 - Agricultural Technology, Machinery and Equipment
 - Mining — Forestry — Pulp and Paper
 - Ocean and Marine Shipboard Technology
16. Information Technologies
17. Medical and Health-care Products
18. Minerals, Metals, Advanced Materials and Construction Products
19. Space
20. Tourism
21. Urban Transit and Rail

For information on how to receive the Strategic Overview, or additional industry sector strategies and international activities lists, please call: **1-800-267-8376**



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Canada's International Trade Business Plan

1994-1995

***An Integrated Plan for Trade, Investment
and Technology Development***

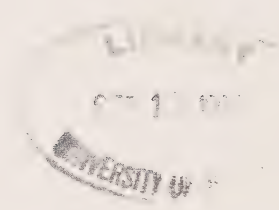


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Aussi disponible en français sous le titre Technologie de l'information.



Information Technologies

Information technologies (IT) include telecommunication services, telecommunication products, computer hardware, software products, information management, computer services, electronic components, geomatics products and instrumentation.

International Environment

The world's IT industry is projected to grow at an annual rate of 9.2 percent, and is forecast to exceed \$3.2 trillion by the year 2000. Current global revenues are \$1.9 trillion, with Canada's share at 3 percent. By the year 2000, the IT industry will account for nearly \$1 of every \$6 of global GNP. (Source: SRI International)

Between 1992 to 1997, the market share for North America is projected to be 47 percent, Europe 32 percent and the Asia-Pacific region 18 percent. The U.S., Japan, France, Germany and the U.K. are forecast to be major purchasers over this period. (Source: INPUT)

Half of the world population is in the Asia-Pacific region with the use of IT growing at 20 percent annually. China is forecast to exceed the U.S. economy in total size by 2015. By the same year, the Association of South East Asian Nations (ASEAN) is expected to have 150 million people with middle-class incomes.

NAFTA, which was implemented on January 1, 1994, will phase out tariffs on virtually all Canadian exports to Mexico within 10 years. NAFTA will also eliminate most Mexican import licensing requirements and open up major government procurement opportunities.

In Latin America overall, the introduction of Intellectual Property Legislation and enforcement, as well as business practices more suited to the North American and European business culture, have made the whole region more attractive to Canadian IT exporters.

The creation, movement and application of information and knowledge are redefining the world economy and politics at all levels. All major

industrial nations either have or are developing national information strategies and infrastructures.

Increasingly, in all industry sectors, value-added and competitive edge depend on the enabling benefits of IT and communications. The industry sectors expected to lead in the use of IT over the next three to five years are the government and public sector, financial and banking institutions, manufacturing and service industries, and the wholesale and retail sectors.

The continuing shift from mainframe-based applications to desktop-client-server based applications enhances the growth of software and networking products, but has created a negative environment for the large, longer-established hardware vendors. The more nimble players are developing very strong positions in the market, bringing about new economic realities in the IT industry and causing fundamental restructuring in many major manufacturing organizations. Service firms that specialize in custom software and system integration have experienced dramatic growth and now account for 16 percent of all IT revenues.

The gradual liberalization of telecommunications markets over the past several years has created numerous new opportunities for telecommunications equipment, software and service providers. The shift to networked computing, mobile communications, cordless phones, intelligent network services, personal communicators, etc., is leading to a convergence of technologies and totally new marketing challenges. The ongoing efforts worldwide to deregulate and privatize domestic telecommunications sectors will bring new openness transparency and fairness in government procurement and exciting new opportunities for qualified Canadian companies.

Canadian Position

In Canada, the IT industry is a major source of employment, innovation, trade and wealth creation, contributing 4.8 percent to Canada's GDP in 1992. Over the past six years, Canada's IT industry has experienced an average growth of 7.2 percent annually. The industry employed 278 000 people and had revenues of \$43.3 billion in 1992. The Canadian IT supply industry is largely characterized by smaller firms that are innovative, have excellent growth potential and have established strong niche positions in which they provide competitive solutions. The creation of alliances and market/technological agreements designed to spread the load of R&D investments and the cost of new market entry, has become one of the most pressing challenges facing the industry. In a global IT market that is served by a wide variety of competitors, it is vital that the Canadian IT industry forges partnerships on a global scale.

Software Products

Canada's software industry has a strong nucleus of companies that have achieved international recognition as technical and market leaders for their products. Most are niche-oriented firms that offer a wide variety of products and processes, with well-known applications in computer graphics and animations, advanced programming tools and languages, Geographic Information Systems (GIS), forms-processing software, and educational and computer-based training products. Also noteworthy are Canadian achievements in such software specialty areas as remote sensing, telecommunications network management, expert systems for mineral processing, real-time systems design, process and industrial control, geophysical engineering and power systems analysis.

The export performance of Canadian software small and medium-sized enterprises (SMEs) is especially important for Canada's prosperity, these companies being a dynamic source of innovation,

employment and new product development. Many of the 1 000 exporting or export-ready companies earn more than 80 percent of their revenue in export markets.

Informatics Services

There are many well-established Canadian computer services companies that have attracted interest and success outside North America. Increasingly, the growth of these firms depends on how well they do in the global marketplace. Many leading Canadian firms are involved in joint ventures, strategic alliances and partnering arrangements to provide broader service offerings in computing, communications and outsourcing. Key industry sectors of interest to Canadian computer services companies are financial services, natural resources and business services.

Telecommunications

In 1992, Canada's telecommunications and electronics components sector employed more than 175 000 people and produced goods and services valued at \$23.8 billion. The telecommunications sector alone accounts for about half of Canada's IT R&D, over \$1 billion for each of the last five years. Canada is a world leader in digital switching and asynchronous transfer mode technologies, leads the Group of Seven (G-7) countries in the deployment of optical fibre, is second in the use of digital networks and intelligent network systems, and worldwide, is second only to Japan in the reliability of its networks. With more than 30 years in satellite communications, Canada is among the leaders in both cellular and satellite. The launch of the *Mobile Communication Satellite (MSAT)* in 1994 by TMI Communications will place Canada at the forefront of mobile Satellite Communications (SATCOM).

In addition to a significant number of world-renowned Canadian telecommunication companies, there are over 300 SMEs increasingly active in all major export markets.

Electronic Components/Instrumentation/Process Control/Computers and Peripherals

Canada's 250 electronic component manufacturers employed 11 000 people in 1992 and generated \$1.2 billion in sales. The printed circuit board industry generated \$300 million in sales, 65 percent of which was from exports. Instrumentation and process control products accounted for shipments of \$2.3 billion in 1992, 40 percent in exports.

Canada's computer and peripheral industry is composed of subsidiaries of some of the most successful multinationals and a growing number of smaller, more specialized subsystem developers. Several of the Canadian-based multinational subsidiaries are garnering increasing responsibility for worldwide product development and manufacturing mandates. Surprisingly, some of these assignments have accrued over a period of significant technological revolution and worldwide corporate restructuring. In the case of smaller Canadian developers, several technological and international marketing achievements have occurred in the areas of video cards, audio cards, communications cards, computer peripherals as well as in the application of industrial and process-control systems. In fact much of the growth in computer establishments is directly attributable to smaller indigenous Canadian manufacturers successfully penetrating foreign markets with their world-leading-edge technology.

Geomatics

The geomatics subsector has grown to almost 300 Canadian companies. The intense use of the geosciences in the development of our resource industries and in the management of our huge geographic infrastructure has promoted the growth of Canada's geomatics industry to a world-leader status. This subsector covers remote-sensing products and services, and GIS products and services. The products and services range from

satellite and airborne remote-sensing equipment to computerized mapping, digitization and analysis systems. Geomatics products and services initially addressed the resource industries (mining, forestry etc.). The technology now addresses a growing number of sectors such as city and transportation planning, environmental services and others.

Industry Associations

Given the diverse applications of the IT subsectors, DFAIT and Industry Canada are working with the three major national IT associations — the Information Technology Association of Canada (ITAC), the Canadian Advanced Technology Association (CATA) and the Canadian Information Processing Society (CIPS) — on international standards, software quality, regulatory issues and dissemination of market intelligence. The Geomatics Industry Association of Canada (GIAC), is deeply involved with DFAIT and NRCan in developing promotional material and international trade strategies. The Armed Forces Communications and Electronics Association is an international association with a very strong organization of professionals in Canada.

Strategic Direction

- **Market Intelligence and Information**
 - Establish a more efficient process to collect market information.
 - Focus on timely dissemination of market opportunities.
 - Develop and maintain Global Market Opportunity Reviews for each subsector.

This initiative seeks to include trade posts, provinces, industry associations and sub-sector groups and individual companies. (DFAIT, Industry Canada and the Surveys, Mapping and Remote Sensing Sector Branch [SMRSS] of NRCan)

■ Sector Capabilities

- Market Canadian information technology capabilities at international events.
- Develop subsector specific capability guides and distribute to targeted international markets. (DFAIT, Industry Canada, SMRSS)

■ Competitiveness/Export Readiness

- Encourage export readiness among SMEs.
- Support the development of international business skills within IT SMEs.

(Canadian Chamber of Commerce, DFAIT, Industry Canada and SMRSS through programs such as sector campaigns, Forum for International Trade Training [FITT] and the New Exporters programs)

■ International Standards

- Support international information technology quality standards.
- Promote increased awareness of improved software development processes and international standards to Canadian SMEs.

In delivering programs, federal and provincial government departments will work with Canadian engineers, engineering centres and standards professionals such as the Canadian Software Quality Forum, which is specifically addressing solutions for the ISO 9000 standards.

■ Technology and Investment

- Companies will be encouraged to access the nationwide network of technology experts associated with NRC's Industrial Research Assistance Program (IRAP) as well as the services provided by the Technology Development Officers and Science Counsellors in our embassies. R&D activity will be encouraged through programs such as IRAP and the Technology Inflow Program (TIP), and participation in Centres of Excellence.

■ Industry Associations

- Work with industry associations, Centres of Excellence, universities and industry networks to develop Canadian SME export readiness and promote international business development of IT sector firms.

(DFAIT is working with ITAC at events such as Softworld, CEBIT and COMDEX to increase international trade and strategic partnering opportunities for Canadian companies, supported by the Program for Export Market Development [PEMD])

■ Geomatics, Special Operating Agency

- To provide more effective support to its client and partner industries in this rapidly growing sector, the SMRSS Branch of NRCan was converted to a special operating agency (SOA) as of April 1, 1994. The agency's mandate includes a special focus on supporting Canada's geomatics industry. The SOA also supports the coordination of provincial agencies interested in improving international market access for their geomatics constituents through the Canadian Council on Geomatics. The agency will continue to support the geomatics export marketing program of DFAIT and will also work closely with other federal government departments and agencies such as Industry Canada in its support for Canadian industry.

■ International Profile

- Promote the international profile of Canadian information technology sector. (DFAIT, Industry Canada and SMRSS with industry associations at "world shopping places" for information technology providers, e.g., Softworld, CEBIT, COMDEX, InterComm '95)

■ Domestic Trade Events

- Identify appropriate trade events within Canada for international buyers for each subsector and document for the trade missions abroad (e.g. COMDEX Canada, Toronto, July 1994; Softworld '94, Fredericton, September 1994; and InterComm '95, Vancouver, February 1995).

International Markets

Geographic Priorities: The priority markets for IT products and services are identified below. There will also be activities for specific niche products in other geographic areas.

U.S.

Apart from some specialized products and services, the U.S. is the first export market for most Canadian IT companies and will remain the primary one for many. Educational missions under the New Exporters programs, exhibiting at major trade fairs and focused partnering initiatives for professional services companies will be maintained to complement the ongoing local support provided by the Canadian Consulates General.

Europe

IT is a priority with all the European posts. The profile achieved by Canada's success as a "partner country" at the CEBIT trade fair in Hannover, Germany, in March 1994 will be sustained at other trade fairs in Europe such as Electronica '94 and CEBIT '95. The trade fair program will be supplemented by educational missions under the New Exporters program and focused software, telecommunications and electronic products missions.

Japan and the Asia-Pacific region

Southeast Asia, ASEAN and Australasia: Planned trade events include fairs, missions and seminars focusing on telecommunication equipment, broadcast and cable, computer-aided design/computer-aided manufacturing (CAD/CAM), geomatics and focused software application products.

Japan: To help companies penetrate the sophisticated Japanese market, a series of outgoing and incoming missions focusing on software and telecommunications are planned for 1994-95.

Latin America

Mexico is a very high-demand market for all IT products and services. Building on Canadian successes in the market, non-traditional and leading-edge suppliers of value-added telecommunications services will be encouraged to explore Mexican opportunities.

The New Exporters to Mexico (NEWMEX) program, a training-based export-oriented program, has been developed in cooperation with the GeoFITT, Canadian Chamber of Commerce program to prepare Canadian IT companies to access the Mexican market. The Canadian Business Centre, opened in Mexico City in 1993, will continue to be developed to provide support to IT exporters.

In Latin America, Canadian companies providing telecommunications equipment, geomatics, specialized personal computer (PC) boards, informatics services and some niche software products are discovering good opportunities in most of these markets.

In addition to traditional trade development activities, strategic alliances on cooperative arrangements for hardware, components and some subassembly suppliers will be highlighted, as well as strategic alliances in software in the areas of geomatics, data transmission, banking and applications.

Contact

Information Technologies Industry Branch
Industry Canada
Tel.: (613) 954-3452
Fax: (613) 952-8419

International Telecommunications Division
Industry Canada
Tel.: (613) 990-4240
Fax: (613) 952-5313

Sectoral Liaison Secretariat
Department of Foreign Affairs and
International Trade
Tel.: (613) 996-1891
Fax: (613) 943-8820

Information Technologies

Activity	Date	Location	Dept.	Contact
Africa and the Middle East				
Africa Telecom	Apr 1994	Cairo, Egypt	DFAIT	(613) 944-0396
Telecom Mission — East Africa	May 1994	East Africa*	DFAIT	(613) 944-6586
Incoming Buyers — Salon de l'informatique de Montréal	Jun 1994	Montreal, Quebec	DFAIT	(613) 944-0396
Incoming Telecom Mission	Jun 1994	Canada*	DFAIT	(613) 944-0396
Incoming Buyers Softworld '94	Sep 1994	Fredericton, New Brunswick	DFAIT	(613) 944-6994
Incoming Mission of Television Officials to Canada	Oct 1994	Canada*	DFAIT	(613) 944-8134
Outgoing Telecom Mission	Oct 1994	Syria* Lebanon*	DFAIT	(613) 944-6994
Outgoing Informatic Mission	Nov 1994	Rabat, Morocco	DFAIT	(613) 944-0396
Tunisia Telecom '94	Nov 1994	Tunis, Tunisia	DFAIT	(613) 944-8134
Informatics & Telecom Seminar/Mecom '95	Jan 1995	Bahrain, Iran	DFAIT	(613) 944-6994
Incoming Buyers to Intercom '95 — Tehran	Feb 1995	Vancouver, B.C.	DFAIT	(613) 944-5984
Incoming Buyers to Intercom '95 — Riyadh	Feb 1995	Canada*	DFAIT	(613) 944-7029
InterComm '95 — East African Buyers	Feb 1995	Vancouver, B.C.	DFAIT	(613) 944-6586
InterComm '95 — Algiers	Feb 1995	Canada*	DFAIT	(613) 944-0396
InterComm '95 — Rabat	Feb 1995	Canada*	DFAIT	(613) 944-8134
Asia Pacific South				
Incoming Visit by Chairman of Indian Telecom Commission	Apr 1994	Canada*	DFAIT	(613) 996-5903
ATUG '94	May 1994	Sydney, Australia	DFAIT	(613) 995-7662
GIS '95 Study Tour	May 1994	Canada*	DFAIT	(613) 995-7659
Incoming Telecoms/Information Technologies (IT) Buyers Mission	Jun 1994	Canada*	DFAIT	(613) 995-7659
Mission to Communic Asia	Jun 1994	Singapore	DFAIT	(613) 996-5824
COMDEX Canada plus Incoming Mission	Jul 1994	Canada*	DFAIT	(613) 996-5824
Technical Seminar on Frequency Management, Personal Communications and Pay TV	Jul 1994	ASEAN region* Australasia*	Industry Canada	(613) 990-4213
PC '94	Aug 1994	Sydney, Australia	DFAIT	(613) 995-7662
Strategic Partner Seminars	Aug 1994	Sydney, Australia	DFAIT	(613) 995-7662
Telecomex '94	Aug 1994	Philippines*	DFAIT	(613) 995-7659
Canadian Technology Marketplace	Sep 1994	Singapore	DFAIT	(613) 996-5824
Mission to Softworld '94	Sep 1994	Fredericton, New Brunswick	DFAIT	(613) 996-5824

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
Private Sector Telecoms Mission from India	Sep 1994	Canada*	DFAIT	(613) 996-5903
Softworld	Sep 1994	Canada*	DFAIT	(613) 996-3667
Indonesian Software Producers	Nov 1994	Canada*	DFAIT	(613) 996-3667
Pacific Telecom Conference	Jan 1995	Honolulu, Hawaii	Industry Canada	(613) 990-4213
InterComm '95 — Singapore	Feb 1995	Vancouver, B.C.	DFAIT	(613) 996-3667
InterComm '95 — Philippines	Feb 1995	Canada*	DFAIT	(613) 996-3667
Telecommunications Mission to Sri Lanka	Feb 1995	Colombo, Sri Lanka	DFAIT	(613) 992-0952
Telecommunications Mission from Pakistan	Feb 1995	Canada*	DFAIT	(613) 996-5903
PC '95	Mar 1995	Sydney, Australia	DFAIT	(613) 995-7662

Central/Eastern Europe and the Commonwealth of Independent States

Policy Consultations with Russia (Telecommunications)	TBD*	Moscow, Russia	Industry Canada	(613) 998-4478
Comnet '94 Tech Mission	May 1994	Prague, Czech Republic	DFAIT	(613) 996-7107
Technical Mission to Russia and CIS (Telecommunications)	Sep 1994	Moscow, Russia Kiev, Ukraine Bucharest, Romania	Industry Canada	(613) 998-4478

East Asia

Canadian CATV Products and Services Mission to Korea and Taiwan (APB '94)	TBD*	Republic of Korea* Taiwan*	Industry Canada	(613) 990-4232
Korean Industry CATV Mission to Canada	May 1994	Canada*	Industry Canada	(613) 990-4232
Rural Telecom Mission from China	May 1994	Canada*	DFAIT	(613) 995-6962
Taipei International Automation & Precision Machinery Show	May 1994	Taipei, Taiwan	DFAIT	(613) 996-7580
Asian Microelectronics Market Penetration Program	Jun 1994	China* Republic of Korea* Taiwan* Hong Kong Singapore	Industry Canada	(613) 954-2868
Computex Taipei	Jun 1994	Taipei, Taiwan	DFAIT	(613) 996-7582
Industrial Laser Technology Transfer Seminar	Jul 1994	Taipei, Taiwan	DFAIT	(613) 996-7582
Sub Sea Engineering Technology Seminar	Jul 1994	Taipei, Taiwan	DFAIT	(613) 996-7582
Taipei Computer Application Show	Aug 1994	Taipei, Taiwan	DFAIT	(613) 996-7582
Cenit '94	Sep 1994	Hong Kong	DFAIT	(613) 995-6962

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
Datacom Mission to China	Sep 1994	Beijing, China Shanghai, China Guangzhou, China Hong Kong	Industry Canada	(613) 990-4210
Mission to Softworld '94/New Brunswick from Hong Kong	Sep 1994	Canada*	DFAIT	(613) 995-6962
Softworld '94	Sep 1994	Canada*	DFAIT	(613) 995-6962
Taipei International Telecommunication Show	Sep 1994	Taipei, Taiwan	DFAIT	(613) 996-7582
Expo Communication China '94	Oct 1994	Beijing, China	DFAIT	(613) 995-6962
Search & Rescue Incoming Mission	Oct 1994	Canada*	DFAIT	(613) 996-7582
Softworld '94	Oct 1994	Canada*	DFAIT	(613) 992-6129
Taipei International Electronic Show	Oct 1994	Taipei, Taiwan	DFAIT	(613) 996-7582
Vietnam Telecomp '94	Oct 1994	Hanoi, Vietnam	DFAIT	(613) 995-8705
Metal Industry Production Automation Technology Transfer	Nov 1994	Taipei, Taiwan	DFAIT	(613) 996-7582
Computerized Simulation Technology Transfer Seminar	Jan 1995	Taipei, Taiwan	DFAIT	(613) 996-7582
CAD/CAM & Computer Presentation System Show	Feb 1995	Taipei, Taiwan	DFAIT	(613) 996-7582
International TV Games & Computer Recreation Show	Mar 1995	Taipei, Taiwan	DFAIT	(613) 996-7582
Japan				
Market Intelligence Trends Newsletter	TBD*	TBD*	DFAIT	(613) 996-2460
Mission to World Computing Congress	Jun 1994	Yokohama, Japan Tokyo, Japan	DFAIT	(613) 996-2460
Geomatics Mission to Japan	Oct 1994	Tokyo, Japan	DFAIT	(613) 996-2460
Latin America and the Caribbean				
Informatica '94	TBD*	Guatemala, Guatemala	DFAIT	(613) 996-6129
Telecommunications — Bilateral Consultations	May 1994	Mexico City, Mexico	Industry Canada	(613) 993-5444
Expo Control '94	Jun 1994	Mexico City, Mexico	DFAIT	(613) 995-0460
COMDEX Sucesu '94	Sep 1994	São Paulo, Brazil	DFAIT	(613) 996-5549
Compumundo '94	Oct 1994	Mexico City, Mexico Monterrey, Mexico	DFAIT	(613) 995-0460
GIS Mission to Mexico and Chile	Oct 1994	Mexico* Chile*	DFAIT	(613) 995-0460
Telexpo/Compuxo '94	Oct 1994	Bogota, Colombia Panama*	DFAIT	(613) 996-6129
El Salvador International Fair	Nov 1994	El Salvador*	DFAIT	(613) 943-5358

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
Identimex '94	Dec 1994	Mexico City, Mexico	DFAIT	(613) 995-0460
Electronic Components	Jan 1995	Mexico*	Industry Canada	(613) 954-2868
Expocom '95	Feb 1995	Mexico*	DFAIT	(613) 995-0460
Telecom Mission from Chile	Feb 1995	Vancouver, B.C.	DFAIT	(613) 996-4199
Multiple Markets				
Incoming Mission to See Canadian Applications	TBD*	Sherbrooke, Quebec Ottawa, Ontario Vancouver, B.C. TBD*	DFAIT	(613) 944-0910
Federal Business Development Bank (FBDB)/Canadian Commercial Corporation (CCC)/Canadian Advanced Technology Association (CATA) Seminar	Apr 1994	Canada*	CCC	(613) 947-1170
Business Opportunities Seminars	May 1994	Vancouver, B.C. Edmonton, Alberta Winnipeg, Manitoba Toronto, Ontario Montreal, Quebec Halifax, Nova Scotia	DFAIT	(613) 996-6188
Consumer Electronics Show	Jan 1995	Las Vegas, Nevada	Industry Canada	(613) 954-2868
InterComm '95 Global Telecom Congress & Exhibition	Feb 1995	Vancouver, B.C.	Industry Canada	(613) 998-0416
United States				
Info Tech Newsletter	TBD*	TBD*	DFAIT	(613) 944-6576
Corporate Computer Expo (CAMP)	Apr 1994	Chicago, Illinois	DFAIT	(613) 944-6576
Services in Software	Apr 1994	Cincinnati, Ohio Cleveland, Ohio Detroit, Michigan Indianapolis, Indiana	DFAIT	(613) 944-9440
Software Distribution Channels	Apr 1994	Buffalo, New York	DFAIT	(613) 944-6576
California Municipal Government Trade Mission — Informatics/Telecoms	May 1994	California*	DFAIT	(613) 944-9440
CATA Annual Conference & Trade Show	May 1994	Toronto, Ontario Vancouver, B.C.	DFAIT	(613) 944-6577
COMDEX/Spring and Windows World	May 1994	Atlanta, Georgia	DFAIT	(613) 944-6576
Midwest Electronics Expo	May 1994	Minneapolis, Minnesota	DFAIT	(613) 944-5149

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
Strictly Business Computer Expo	May 1994	Minneapolis, Minnesota	DFAIT	(613) 944-6576
Supercomm '94	May 1994	New Orleans, Louisiana	DFAIT	(613) 944-6577
Incoming Mission on Video and Telecommunications Network from Detroit	Jun 1994	Toronto, Ontario	DFAIT	(613) 944-6577
PCEXP0	Jun 1994	New York*	DFAIT	(613) 944-6576
Missions to COMDEX/Canada	Jul 1994	TBD*	DFAIT	(613) 944-6576
National Association of State Telecommunications Directors (NASTD)	Aug 1994	Wyoming*	DFAIT	(613) 944-6577
Geomatics Mission in Conjunction with Federal/Geographic Technology Conference	Sep 1994	Washington, D.C.	DFAIT	(613) 944-9440
Networld + InterOp	Sep 1994	Atlanta, Georgia	DFAIT	(613) 944-6576
Graphexpo East '94	Sep 1994	Philadelphia, Pennsylvania	DFAIT	(613) 944-9475
UNIX Expo	Oct 1994	New York*	DFAIT	(613) 944-6576
Wescon	Oct 1994	Los Angeles, California	DFAIT	(613) 944-6576
COMDEX/Fall	Nov 1994	Las Vegas, Nevada	DFAIT	(613) 944-6576
Comm. Managers Association (CMA)	Nov 1994	New York City, New York	DFAIT	(613) 944-6577
Informatics Marketing Strategies for U.S. Government	Feb 1995	Canada*	DFAIT	(613) 944-9440
National Association of Broadcasters (NAB)	Mar 1995	Los Angeles, California	DFAIT	(613) 944-6577
Western Europe and European Community				
Incoming Journalist (Informatics) Copenhagen, Helsinki	May 1994	Canada*	DFAIT	(613) 995-4730
TMAB '94	May 1994	Brussels, Belgium	DFAIT	(613) 995-6435
New Exporters to Overseas Markets (NEXOS) Software and Communications Mission & Seminar	Sep 1994	London, England TBD*	DFAIT	(613) 995-6565
ORBIT (Info Technology)	Sep 1994	Basel, Switzerland	DFAIT	(613) 996-5263
Outgoing Geomatics Mission	Sep 1994	Germany*	DFAIT	(613) 996-3774
Softworld '94 (Promotion Diskette)	Sep 1994	Fredericton, New Brunswick	DFAIT	(613) 943-0611
Komponent '94	Sep 1994	Göteborg, Sweden	DFAIT	(613) 995-4730
Ocean 1994/Convention Technomer	Sep 1994	Brest, France	DFAIT	(613) 996-2363
International Broadcasting Convention (IBC)	Sep 1994	Amsterdam, Netherlands	DFAIT	(613) 995-6435

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
SMAU (Information Technology)	Oct 1994	Milan, Italy	DFAIT	(613) 995-9766
Computer-Aided Design/Computer-Aided Manufacturing/ Computer Integrated Manufacturing (CAD/CAM/CIM) (Info Technology) SYSTEC	Oct 1994	Munich, Germany	DFAIT	(613) 943-0611
NEXOS Geomatics Mission & Info Booth	Nov 1994	Birmingham, England TBD*	DFAIT	(613) 995-6565
Outgoing Mission and Seminar to Eurocomnet '94	Nov 1994	Amsterdam, Netherlands	DFAIT	(613) 995-6435
Electronica '94	Nov 1994	Munich, Germany	Industry Canada	(613) 954-3348
SIMO (Office Equipment & Data Processing)	Nov 1994	Madrid, Spain	DFAIT	(613) 995-6440
Networks '94	Nov 1994	Stockholm, Sweden	DFAIT	(613) 995-4730
Advanced Technology Mission to the Nordics	Jan 1995	Nordic countries*	DFAIT	(613) 995-4730
Industrial Automation/Instrumentation Mission	Jan 1995	Vienna, Austria	DFAIT	(613) 995-9766
InterComm '95	Feb 1995	Vancouver, B.C.	DFAIT	(613) 996-2363
Speaker for Technology Roundtable	Feb 1995	Oslo, Norway Stavanger, Norway	DFAIT	(613) 995-4730
CEBIT '95	Mar 1995	Hannover, Germany	DFAIT	(613) 943-0611
Iconographic Show	Mar 1995	Milan, Italy	DFAIT	(613) 995-9766

* Exact dates and/or cities to be determined.



Canada's International Trade Business Plan is made up of three key components: a Strategic Overview, a series of industry sector strategies, and an accompanying series of international activities lists. Industry sectors available include:

1. Advanced Manufacturing Technologies
2. Aeronautics
3. Agri-Food Products
4. Arts and Cultural Industries
5. Automotive
6. Biotechnologies
7. Business and Professional Services
8. Chemicals and Plastics
 - Chemicals and Petrochemicals
 - Plastics and Polymer Products
9. Consumer Products
 - Apparel Industry
 - Business and Institutional Furniture
 - Footwear
 - Hardware and Housewares
 - Household Furniture
 - Sporting Goods (including recreational watercraft)
 - Textiles
10. Defence and Related Products
 - Aviation, Marine and Defence Electronics
 - Marine and Land Defence Systems
11. Electrical and Energy Equipment
 - Electrical Equipment
 - Oil and Gas Field Equipment
12. Environmental Industries
13. Fish and Seafood Products
14. Forest Industries
15. Industrial Technologies
 - Agricultural Technology, Machinery and Equipment
 - Mining — Forestry — Pulp and Paper
 - Ocean and Marine Shipboard Technology
16. Information Technologies
17. Medical and Health-care Products
18. Minerals, Metals, Advanced Materials and Construction Products
19. Space
20. Tourism
21. Urban Transit and Rail



For information on how to receive the Strategic Overview, or additional industry sector strategies and international activities lists, please call: **1-800-267-8376**



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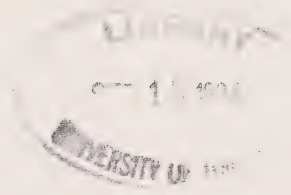
Canada's International Trade Business Plan

1994-1995

***An Integrated Plan for Trade, Investment
and Technology Development***



Doing Business Abroad



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Aussi disponible en français sous le titre Produits médicaux et de santé.



Medical and Health-care Products

The medical and health-care products sector includes firms providing a wide range of products and services used for diagnosis and treatment of ailments. This includes medical, surgical and veterinary equipment, orthopedic appliances, prosthetics and electromedical equipment.

International Environment

Cost-containment pressures, changing demographics and increasing health consciousness are among the forces driving the growth of health-care equipment and services worldwide. An aging population has fuelled health-care costs and has resulted in a dramatic increase in demand for products such as electronic cardiovascular devices and mobility aids. The world market for medical and health-care products was estimated at US\$80.8 billion in 1992 and is forecast to grow 5 to 8 percent annually to the year 2000. For certain market segments, growth rates in excess of 20 percent are likely.

International Market Trends

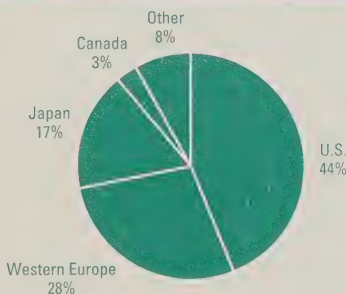
- **Cost Containment** — Pressures to contain health-care costs should result in a movement away from labour-intensive health-care practices (almost 70 percent of costs today) to more technology-intensive methods.

- **Home Health Care** — Health-care products now being used at home include mobility and rehabilitation equipment, incontinence and ostomy products, diagnostic kits, health monitors (blood pressure, blood glucose levels, cholesterol), ventilators, apnea monitors and dialysis units.
- **AIDS Products** — An enormous market has emerged for AIDS products in response to both patient and health provider needs (e.g. diagnostic kits, blood-handling products and blood-screening tests).
- **Transportable Products** — Simple, easily transportable products, such as mobile hospitals, blood analyzers and portable X-ray units, have witnessed high growth rates in the past five years in emerging Third World markets.

While the U.S. remains the world's largest consumer of medical devices (see Figure 1), this market is expected to decline as a percentage of the world market. Cost-containment pressures and health-care reform in the U.S., as well as growth in other markets, particularly Asia and Latin America, account for this trend.

The key players in medical device production are the U.S. (with 49 percent of world market share), Europe (29 percent) and Japan (17 percent). U.S. companies have made enormous commitments to R&D in medical technologies to develop this leading position. Many U.S. health-care companies are expected to expand overseas in the near future as a result of constraints in the domestic market, which have also affected non-U.S. producers.

Figure 1 — Market Size by Country, 1992



Source: Health Industry Manufacturers Association, *Medical Device Industry Handbook*, 1993.

The medical and health-care industry in the EC consists mainly of many small enterprises specializing in a small number of closely related products in narrowly defined niche markets. A broad range of products, exclusively in the medical equipment field, is produced by the few medium to large-sized companies in the industry. These companies are considered to be major competitors to the U.S. European companies targeting the U.S. have experienced stagnating markets, while exports to Japan have more than doubled between 1985 and 1990.

Japan appears to be a growing market for medical and health-care products, particularly in products for the elderly. Although Japanese companies have become particularly competitive in standard instrumentation products internationally, they are a distant third as producers of medical and health-care equipment.

How Companies Compete

R&D appears to be a critical feature for the medical and health-care products industries. Producers of medical products have enjoyed relatively high commercialization rates for R&D, which has led to increased investment in new medical technologies. For successful U.S. companies, this has led to faster product-development rates — crucial for developing market demand.

For smaller companies without significant financial resources to conduct wide-scale R&D, production for niche markets appears to be the key, as demonstrated by the European experience. Many of these smaller companies have been able to support focused R&D efforts through cooperative arrangements with other companies and research organizations.

Canada's regulatory climate encourages the development of export manufacturing from a Canadian base.

Canadian Position

Canada is one of the world's leading consumers of medical devices, purchasing \$2.4 billion in products in 1992. Growth in the Canadian market for the past 15 years has attracted substantial interest from international suppliers, particularly U.S. companies.

Number of Firms	800 companies; approximately 90 percent are Canadian-owned.
Canadian Production	\$1.3 billion (1991); one third of this is exported, with 60 percent going to the U.S.
Domestic Consumption	\$2.4 billion
Imports	75 to 80 percent of the domestic market is served by imports.
Employment	20 000 people

The medical and health-care industry in Canada consists of 800 companies producing 1 500 categories of products. Three quarters of these firms employ less than 50 people and almost all are Canadian-owned. Many of these companies are export-oriented and a number of them have developed leading technologies and unique innovative devices. This is largely a result of significant investments in R&D. Challenged by international competition, Canadian companies are expected to increasingly introduce higher-value-added products to serve global markets.

Although representing only 10 percent of the companies operating in Canada, subsidiaries of foreign-based multinational enterprises (MNEs) (mainly U.S.-owned) dominate the Canadian marketplace. These are mostly larger companies manufacturing some product lines in Canada for the domestic market, as well as marketing and distributing parent-company products in Canada. Recently, rationalization in some of these

companies has resulted in plant closures and job losses in Canada, while others have gained geographic manufacturing mandates.

Although a number of MNEs producing medical devices have a manufacturing presence in Canada, there has been limited investment in in-house R&D from these companies. In the pharmaceutical area, however, increased patent protection under Bills C-22 (as passed by the House of Commons on May 6, 1987) and C-91 (passed on December 10, 1992) has supported the expansion of R&D investment in Canada. In both the pharmaceutical and medical device sectors, Canadian subsidiaries are attempting to influence their corporate headquarters to make their Canadian operations part of their companies' global strategies through R&D or export manufacturing mandates. High labour costs associated with the manufacturing of medical devices have to some extent been a deterrent.

CANADIAN MEDICAL DEVICES INDUSTRY

Infrastructural Advantages

- World-class network of universities and hospitals, as well as government laboratories (i.e. NRC)
- Generous R&D tax credit policy
- Regulatory environment favouring export manufacturing
- A health-care system of international repute which contributes to a positive image and support for Canada's medical manufacturing sector.

Strengths

Pioneering work such as:

- development of the world's first heart pacemaker
- world's first Cobalt 60 cancer therapy unit.

Technology applications in:

- cardiovascular devices
 - diagnostic equipment
 - orthopedics/prosthetics/orthotics
 - assistive devices
 - medical imaging/brain mapping techniques
 - biomaterials.
-

Despite the emergence of a significant number of medical and health-care suppliers in Canada, two major issues stand in the way of this industry's further development.

- Lack of world product mandates for Canadian subsidiaries has impeded the movement towards manufacturing of technology-intensive products, and has limited Canadian manufacturers' ability to compete in the emerging global market for such products.
- Lack of investment capital is impeding the development of many start-up and early-stage firms.

Strategic Direction

International business development opportunities for Canadian medical device manufacturers and service providers exist in the following areas:

- imaging (software, therapy and diagnostic, e.g., ultrasound)
- in-vitro diagnostics
- assistive devices (wheelchairs, patient lifts)
- cardiovascular devices
- dental.

These subsectors will be encouraged, as will companies producing devices that are sensitive to cost-containment pressures and businesses focusing on the commercial development of other higher-value-added devices.

- Federal government support for international business development by Canadian suppliers of health-care products will focus primarily on the U.S. and European markets. The objectives will be to attract world product mandates to Canada from larger MNEs, as well as to establish international partnerships involving investment, marketing and technology with U.S. and European partners. (Industry Canada and DFAIT)

- In all of these marketplaces, Canadian health-care firms will be encouraged to gain certification under ISO 9000 to enhance their international supply capabilities. (Industry Canada)

Geographic Markets

Major Markets

Figure 2 suggests the largest markets for Canadian exporters of medical and health-care devices.

Emphasis is on:

- strategic partnerships
- export development
- investment/product mandates.

Specifically,

- Canadian government departments will support Canadian participation in U.S. health-care trade shows to facilitate the development of strategic partnerships and export opportunities for Canadian companies in the U.S.; important trade shows include the National Home Health Care Show and the Radiological Society of North America (RSNA) Show. (DFAIT)
- Further government efforts will focus on attracting investment from U.S. MNEs in the form of product and research mandates for Canadian subsidiaries. (Industry Canada and DFAIT)
- Canadian government departments will continue to match Canadian and German companies for strategic alliances, with a possible extension to include Italy; there will also be a greater emphasis on disseminating information to Canadian companies on new EC standards, compliance requirements and emerging opportunities. (Industry Canada and DFAIT)

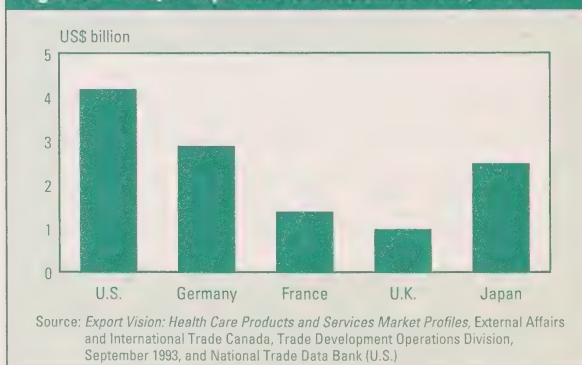
- Government will support Canadian companies in the Japanese market, currently estimated at US\$13.5 billion (although a major one in terms of size, this is an expensive market for new business development); support will focus particularly on the expanding Japanese need for products for the elderly (e.g. wheelchairs, patient lifts, walkers, incontinence products), with follow-up activity to capitalize on market interest generated by a Canadian show held in late 1993 in this product area. (Industry Canada and DFAIT)

Other Markets

Due to tightening in the U.S. market, Canadian government departments have started supporting initiatives in other markets.

- In the Pacific Rim, market development efforts are slated for Singapore, Thailand, Indonesia and Malaysia. More technologically advanced products, such as medical imaging and cardiovascular devices, will be targeted at Singapore. (Industry Canada)

Figure 2 — Major Importers of Medical Devices, 1992



- Initiatives for the developing markets of Latin America will focus on lower-cost products and will build on successful initiatives already undertaken in Panama and Ecuador. Latin American countries have indicated a particular interest in Canadian generic pharmaceuticals. Initiatives for Mexico will be supported by the Access North America Program. This program will be particularly responsive to opportunities in Mexico for technology-intensive devices. (Industry Canada and DFAIT)

- The Middle East is also a market of considerable potential, with follow-up activity planned to the mission there in late 1993. (Industry Canada)

Contact

Health Care Products Directorate
Materials, Chemicals and Bio-industries Branch
Industry Canada
Tel.: (613) 954-3077
Fax: (613) 952-4209

Medical and Health-care Products

Activity	Date	Location	Dept.	Contact
Africa and the Middle East				
Outgoing Health Products & Medical Devices Mission	Aug 1994	Jordan* West Bank* Gaza* Syria* Lebanon*	DFAIT	(613) 944-6994
Incoming Buyers Mission to Rehabex '95	Oct 1994	Toronto, Ontario	DFAIT	(613) 944-7029
Outgoing Mission to Saudi Medicare & Dentistry Show	Nov 1994	Riyadh, Saudi Arabia	DFAIT	(613) 944-5984
Arab Health '95	Jan 1995	Kuwait* United Arab Emirates*	DFAIT	(613) 944-6847
Seminars on Saudi Arabian Business Practices	Jan 1995	Saudi Arabia*	Industry Canada	(613) 954-2951
Asia Pacific South				
Medical Equipment Mission from Canada	Sep 1994	Thailand*	DFAIT	(613) 996-7256
Central/Eastern Europe and the Commonwealth of Independent States				
Health Care Services Mission to East Europe	Apr 1994	Hungary* Ukraine* Bulgaria*	DFAIT	(613) 996-6652
East Asia				
International Medical Equipment & Pharmaceutical Show	Nov 1994	Taipei, Taiwan	DFAIT	(613) 996-7582
Occupational Hygiene International Conference & Exhibition	Nov 1994	Hong Kong	DFAIT	(613) 995-6962
Japan				
Medical Devices Importers — Institutional	Sep 1994	Canada*	DFAIT	(613) 996-2460
Japan Homecare & Rehab Show	Nov 1994	Tokyo, Japan	DFAIT	(613) 996-2460
Japan External Trade Organization (JETRO) Health Care Show	Mar 1995	Japan*	DFAIT	(613) 996-2460
Latin America and the Caribbean				
Health Care Services Mission to Latin America	Sep 1994	Ecuador* Peru* Venezuela*	DFAIT	(613) 996-5548
Expo Hospital '95	Feb 1995	Mexico City, Mexico	Industry Canada	(613) 954-3068

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
United States				
Health Care Showcases	TBD*	Washington, D.C.	DFAIT	(613) 944-9482
Connect Biotech Corporate Partnerships Series	Apr 1994	San Diego, California	DFAIT	(613) 944-9482
Interphex '94 Show	Apr 1994	New York City, New York	DFAIT	(613) 944-9482
Mid-Atlantic Health Care Show	May 1994	Atlantic City, New Jersey	DFAIT	(613) 944-9482
Outgoing Medical Equipment Mission	Jun 1994	Delaware Valley, Philadelphia	DFAIT	(613) 944-9482
Medical Services Seminar	Oct 1994	Chicago, Illinois	DFAIT	(613) 944-9482
National Home Health Care Show	Nov 1994	Atlanta, Georgia	DFAIT	(613) 944-9482
Radiological Society of North America (RSNA) Show	Nov 1994	Chicago, Illinois	DFAIT	(613) 944-9482
Health Care Missions to the U.S.	Jan 1995	Washington, D.C. U.S. cities*	Industry Canada	(613) 954-2951
Western Europe and European Community				
Healthcare '94	Apr 1994	Istanbul, Turkey	DFAIT	(613) 996-1530
"Hospital" (Medical Devices)	May 1994	Bologna, Italy	DFAIT	(613) 995-9766
Outgoing Mission to NORDICS (Medical Devices)	May 1994	Copenhagen, Denmark	DFAIT	(613) 995-4730
New Exporters to Overseas Markets (NEXOS) Medical Devices Mission & Seminar	Jul 1994	London, England TBD*	DFAIT	(613) 995-6565
Medical Devices (Technical Seminar & Mission)	Sep 1994	Madrid, Spain Barcelona, Spain	DFAIT	(613) 995-6440
NEXOS Mission and Info Booth to EXPOMED	Oct 1994	Brussels, Belgium	DFAIT	(613) 995-6440
International Federation of Associations of Specialists in Occupational Safety and Industrial Hygiene (IFAS) — Medical & Hospital Equipment Show	Nov 1994	Zurich, Switzerland	DFAIT	(613) 996-1530
MEDICA '94	Nov 1994	Düsseldorf, Germany	DFAIT	(613) 943-0611
Medicine '94	Nov 1994	Stockholm, Sweden	DFAIT	(613) 995-4730
MEDICA '95	Nov 1994	Utrecht, Netherlands	DFAIT	(613) 995-6440

* Exact dates and/or cities to be determined.

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DVR 68

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Minerals and Metals

This sector covers the extraction of coal, industrial minerals and materials, in addition to both ferrous and non-ferrous industries including mining, upstream processors such as smelting and refining, and downstream semi-manufacturers. Sections on advanced materials and construction products are also included.¹

International Environment

The world's major producing and consuming nations of minerals and metals are Canada, the U.S., countries of the former U.S.S.R., Japan and the member countries of the EC. China is also attracting more and more interest as both a major producing and consuming nation.

The demand outlook for 1994-95 remains guarded as most metal-consuming OECD countries are anticipating slow industrial growth, particularly in the EC and Japan. In addition, the former U.S.S.R.'s continued high export levels of aluminum, nickel and other metals will continue to depress prices. North American demand is expected to improve modestly as the U.S. and Canadian economies recover. Growth in production is expected to continue in Chile, Australia, Mexico, Brazil and China, while the fastest-growing consumption will occur in Asian countries (e.g. Republic of Korea, China and Taiwan).

The implementation of NAFTA on January 1, 1994, will open Mexican markets to increased Canadian exports, especially in steel and in non-ferrous semi-fabricated products, and will require Canadian producers to adjust to increased Mexican competition in the U.S. and Canadian markets. In addition, the successful outcome of the GATT negotiations and the continuation of the Multilateral Steel Agreement negotiations have addressed some of the market-access and trade-remedy concerns of the steel and non-ferrous metals industries, particularly for nickel and

copper. However, discussions will need to continue regarding market access for Canadian aluminum.

Traditionally, Canada, the U.S. and Australia have received most of the world investment for exploration. However, a number of countries, particularly those in Latin America with good mineral potential, have recently created a more favourable environment for foreign investors. This has resulted in fiercer competition between countries for mineral investment. Indeed, increasing production from Australia, and from Asian and South American countries that have recently liberalized their investment climates will affect Canada's relative share of the world market. However, the emergence of competing nations offers opportunities for the mining-related industry to export technology and know-how on mining as well as minerals and metals processing.

Canadian Position

Canada's minerals and metals industry is dominated by a group of companies that are among the world's most sophisticated and competitive firms engaged in the exploration, extraction, processing and manufacturing of minerals and metals. The industry has long been a major contributor to the Canadian economy, not just in terms of its production, but also in view of the key industries that are based on its output and activities (see Table 1).

Canada is one of the world's leading producers of primary and semi-fabricated aluminum, copper, nickel and zinc, exporting the majority of its

¹ This section does not present a trade development strategy for individual commodity groups.

Table 1 — The Minerals and Metals Industry and the Canadian Economy, 1992

Gross Domestic Product	4.2%
Employment	2.8%
Exports	16.2%
Rail and Sea Traffic	60%
Single-Industry Communities	115
Mines	320+
Downstream Establishments	7 500+

Source: Statistics Canada.

refined non-ferrous metal production. Canada is also a leading world exporter of coal, asbestos, elemental sulphur and potash. Canadian steel exports of 3.0 million tonnes (MT) in 1992 represented 4.1 percent of world exports.

Due to the global nature of metal markets, some Canadian non-ferrous metal producers have developed into large integrated international companies with diversified geographical interests. On the other hand, downstream manufacturing activities are more typically oriented toward domestic and continental markets. However, this is expected to change as access to foreign markets improves for Canada's processed and manufactured products. Canadian ferrous metal producers are generally domestic producers with significant exports to the U.S.

The thrust for improved productivity in mining operations has pushed innovative Canadian companies to the forefront of the industry. In the pursuit of sustainable development, the Canadian government and industry are increasingly joining forces in collaborative R&D of processes, technologies and products that will minimize the environmental impact of industrial activity. Over the past five years, the industry has invested over \$1 billion in new plants and technology to meet the environmental and productivity challenges of today's world.

Production technology R&D, geomatics-processing technology and geoscience research are niches of excellence within the Canadian industry. Canada is a world leader in the application of geomatics technologies, including remote sensing and Geographic Information Systems (GIS) for mineral exploration and environmental monitoring.

Finally, issues of particular interest to the minerals and metals industry are:

- market transparency, trade liberalization, market access and trade remedy cases
- opportunities in, and competition from, emerging and rapidly developing economies
- the impact of excess supply of metals and potential market disruptions as a result of exports originating from countries of the former U.S.S.R.
- fiscal and regulatory frameworks, notably as they relate to the environment
- as an emerging issue, the development, acquisition and adoption of new materials and technology.

Strategic Direction

Market Access

The Canadian minerals and metals industry requires government support in international trade agreements and trade regulatory exercises where governments develop rules that affect market access. Specifically, the government, in cooperation with industry, will undertake to:

- pursue a North American steel accord with the U.S. and Mexico and will continue to support open access to the U.S. market for the steel industry

- ensure that trade/environment/health regulatory initiatives pursued by international institutions and by other countries balance environmental/health and economic considerations and do not result in barriers to trade or other discriminatory practices
- ensure that the conclusions of international health and environmental exercises covering the industry are based on sound science, and that they do not propose policies that could create restrictions on the production, processing, marketing, trade, use and disposal/recycling of mineral and metal commodities.

Market Intelligence and Market Transparency

The Canadian metals and minerals industry is seeking government support in obtaining market information on countries where it has not traditionally been well-connected and in providing reliable worldwide industry and market intelligence. Specifically, the government, in cooperation with industry, will:

- support and promote international commodity study groups for major mineral and metal commodities which bring producers and consumers together; full participation by the former U.S.S.R., especially Russia, is a major objective
- use its information networks and arrange missions to obtain accurate and timely market intelligence on other countries' supply capabilities, their scientific and know-how capabilities, and investment and market opportunities; the former U.S.S.R.'s aluminum, nickel and potash industries will be a major target for these activities
- pursue technical or regulatory issues with countries that are important markets or competitors, or with countries that are potential allies or opponents on policy; for example, the federal government places a priority on its bilateral minerals and metals working groups with countries such as the U.S., Mexico, China, the Republic of Korea and with the EC, and on its relations with Japan, countries of the former U.S.S.R. and other countries.

Trade Promotion

R&D and the application of new technologies (including environmental technologies) can substantially increase productivity and efficiency in the Canadian minerals and metals sector. Specifically, the government, in cooperation with industry, will:

- target resources at the Pacific Rim countries, including China and the Republic of Korea, and at the Middle East, Mexico and Latin American countries; activities will include missions, work through and with the Canadian diplomatic missions, bilateral relations, coordination with the provinces and industry organizations
- encourage the continued development and exploitation in international markets of technologies by Canadian companies; the government and industry will also encourage international collaborative research and scientific exchange programs, as these activities provide opportunities to promote Canadian expertise
- undertake trade promotion activities in a number of markets for metal and non-metal fabricated products and for ancillary industries such as consultancy, equipment and technology supply, as well as the segments of the industrial minerals industry.

Attracting Investment

The federal government has ongoing studies² to evaluate the international competitiveness of Canada as a recipient of mining and manufacturing investment. It also has a program of international mining investment seminars. Specifically, the government, in cooperation with industry, will:

- conduct seminars in Pacific Rim and European financial centres to provide relevant information to potential foreign investors in the Canadian minerals and metals industry
- monitor investment climate changes in countries that are significant competitors to Canada to assess the need to adjust relevant government policies.

Contacts

Resource Processing Industries Branch
Industry Canada
Tel.: (613) 954-3122
Fax: (613) 954-3079

Mineral Strategy Branch
Natural Resources Canada
Tel.: (613) 995-2661
Fax: (613) 992-5244

² Copies of these studies may be obtained by contacting the Economic and Financial Analysis Branch, Mining Sector, NRCan, 460 O'Connor Street, Ottawa, Ontario, K1A 0E4.

Advanced Materials

Advanced materials include metals, ceramics, polymers and composites of these. They are materials that have high value-added and are at the early stage of the product life cycle.

Advanced materials constitute a spectrum of new materials and processes that enable the design and manufacturing of products with novel and improved properties. The field is not considered a sector like others. There are few firms that operate solely in the field and those that do are small to medium-sized firms. For large firms (e.g., Inco, Noranda, Alcan, Sherritt), advanced industrial materials, while the focus of significant R&D efforts, still represent a limited percentage of revenues.

International Environment

The market for advanced industrial materials is difficult to estimate authoritatively. The field is highly diversified, definitions of advanced materials differ and production/consumption data are often scarce. It is estimated that the world market for advanced industrial materials will be \$450 billion by the year 2000, with the U.S. market representing 50 percent of the total.

The reduction in defence spending, combined with the economic slowdown throughout the world, and more acutely felt in the aerospace industry (by far the largest client for advanced materials), has caused many advanced materials firms to restructure. As a consequence, 1993 has seen more than its share of disinvestitures, buyouts and new strategic directions among both small and large advanced materials firms.

There is a trend within the advanced industrial materials supplier community to develop new non-aerospace civilian markets, namely automotive, construction, sporting goods and other niche applications (medical, etc.). Companies are turning to international partnerships to access new

technologies and markets. Alliances forged from strong technical ties among suppliers, processors and product manufacturers reduce R&D costs and create synergies leading to market growth.

Canadian Position

Canada's current advanced industrial materials segment is small in dollar terms relative to traditional materials. We are a marginal player in this sector compared to Europe, Japan and the U.S.

Increasingly, our large metal-processing companies are undertaking the development, production and marketing of new value-added materials. Alcan, for example, is the world's largest manufacturer of aluminum matrix composites. Other firms, such as Inco, Noranda and Sherritt, are actively pursuing advanced industrial materials development opportunities.

Canada possesses niche strengths in sectors, such as metal matrices, metal powders, ceramics and polymers. There is room for substantial growth to achieve the potential that this segment offers in the longer term.

Strategic Directions

- Concentrate effort on exploiting technical and marketing strengths demonstrated by key companies and strategic alliances in niche opportunities for advanced industrial materials, specifically in the fields of metal matrices, metal powders, ceramics and polymer composites. (Industry Canada, NRC, Canada Centre for Mineral and Energy Technology [CANMET], DFAIT)

- Treat the U.S. as the priority export market for Canada's advanced industrial materials manufacturers. The U.S. defence sector has been a major user of these materials. While the industry is in decline, opportunities may still be sought under the Canada-U.S. Defence Development and Defence Production Sharing Agreements. (Industry Canada, NRC, DFAIT)
- Support networks to facilitate access to foreign technology in advanced industrial materials. Broker R&D and marketing alliances between firms with special attention to applications in the automotive, construction and other niche markets sectors. (Industry Canada, NRC)
- Regard Japan, with its established technological strength in advanced industrial materials, as important primarily as a source of technology rather than as a market in the short term. The Japan Science and Technology Fund, administered by DFAIT, supports a variety of cooperative science and technology activities. Specifically, Japan's work in composites technology for bridges and structures may find commercial applications in North America. (Industry Canada, DFAIT)

- Seek strategic opportunities in Europe to forge cooperative ventures between Canadian and European partners in advanced industrial materials; aerospace, construction products and surface transportation equipment may offer opportunities. (Industry Canada, DFAIT, NRC)

Contact

Materials, Chemicals and Bio-industries Branch
 Industry Canada
 Tel.: (613) 954-3114
 Fax: (613) 952-4209

Construction Products

Construction products in this sector include fabricated metal products such as architectural metal products, metal doors and windows, and metal plumbing fixtures as well as non-metallic mineral-based materials such as cement, glass, gypsum wallboard and dimension stone. Similar plastic products are dealt with in *Chemicals and Plastics* while wood-based building products are described in *Forest Industries*.

International Environment

World trade in construction products has grown substantially in the past 10 years in line with increasing economic globalization. Products traded include commodities such as nails, cement, mineral wool insulation, building stone and gypsum wallboard, but individual firms may find niche markets in many diverse specialty product areas.

Canadian Position

Traditionally, construction products manufacturers have concentrated on the domestic market, but the situation is changing with more emphasis being placed on exporting a wide range of products. Canadian exports of metallic and non-metallic mineral based construction products in 1992 were approximately \$1.2 billion of which nearly 85 percent went to the U.S.

In international markets, Canadian construction products are known for their superior quality which, in part, is dictated by the extreme weather conditions experienced in Canada. In markets such as Japan, the prices of Canadian construction materials are very attractive when compared with locally produced products. High transportation costs, trade barriers, and differences in codes and standards in other countries are deterrents to trade, but progress is being made to minimize these constraints.

Strategic Direction

- Industry Canada and DFAIT will facilitate increased trade activity in construction products through the use of market intelligence, trade shows and both incoming and outgoing missions in 1994-95.
- Market development efforts will continue to focus on the U.S.
- Other market development efforts will continue in Japan and Mexico where new Canadian non-wood products were recently introduced.
- Niche opportunities will be sought in Asia, Latin America, the Caribbean, the Middle East and Europe.

Contact

Resource Processing Industries Branch
Industry Canada
Tel.: (613) 954-3126
Fax: (613) 954-3079

Minerals, Metals, Advanced Materials and Construction Products

Activity	Date	Location	Dept.	Contact
Africa and the Middle East				
Construction and Environmental Products & Services Mission	Aug 1994	Amman, Jordan	DFAIT	(613) 944-6994
Asia Pacific South				
Prospectors and Developers Association of Canada	May 1994	Toronto, Ontario	DFAIT	(613) 996-1052
SIBEX '94 (Construction Materials)	May 1994	Singapore	DFAIT	(613) 996-7256
APEC Clean Coal Seminar	Sep 1994	Jakarta, Indonesia	NRCan	(613) 992-2018
Indonesian Construction and Building Products	Sep 1994	Singapore	DFAIT	(613) 996-3667
Thaibex	Nov 1994	Bangkok, Thailand	DFAIT	(613) 996-7256
Central/Eastern Europe and the Commonwealth of Independent States				
Building Materials Mission	TBD*	Warsaw, Poland	DFAIT	(613) 996-7107
Incoming Mining Mission to Mineral Outlook Conference	Apr 1994	Toronto, Ontario	DFAIT	(613) 992-8590
Building Products & Home Improvement	Apr 1994	Prague, Czech Republic	DFAIT	(613) 996-7107
Construma '94	Apr 1994	Budapest, Hungary	DFAIT	(613) 992-1449
Incoming Building Materials and Construction Services Mission	May 1994	Larvia* Estonia*	DFAIT	(613) 996-6652
Outgoing Mining & Construction Services & EQ Mission to Yukatla, Magadan and Kittabarovsk	Oct 1994	Moscow, Russia	DFAIT	(613) 996-6429
Construct Canada '94	Dec 1994	Toronto, Ontario	DFAIT	(613) 998-7107
East Asia				
Canada-Korea Working Group on Minerals & Energy	Apr 1994	Canada*	NRCan	(613) 996-2499
Construction & Building Materials Market Study	Apr 1994	Taipei, Taiwan	DFAIT	(613) 996-7582
4th Meeting of the Canada-China Ferrous Metals Working Group	Jun 1994	Ottawa, Ontario	NRCan	(613) 996-2499
IBEX '94	Jun 1994	Hong Kong	DFAIT	(613) 995-6962
Prefabricated Housing Seminar	Jul 1994	Taichung, Taiwan	DFAIT	(613) 996-7582
Building Products Mission to Canada	Aug 1994	Canada*	DFAIT	(613) 996-7582
7th Meeting of the Canada-China Nonferrous Metals Working Group	Sep 1994	China*	NRCan	(613) 996-2499
Building Materials/Construction Technology	Sep 1994	Canada*	DFAIT	(613) 995-8705
Material Handling & Construction Equipment	Sep 1994	Taipei, Taiwan	DFAIT	(613) 996-7582

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
Construction Materials & Services	Oct 1994	Ho Chi Minh, Vietnam	DFAIT	(613) 995-8705
China Building '94	Nov 1994	Beijing, China	DFAIT	(613) 996-6987
Construction Industry Seminars	Nov 1994	Shanghai, China	DFAIT	(613) 996-6987
Modern Building Materials Application Show	Dec 1994	Taipei, Taiwan	DFAIT	(613) 996-7582
Seminar on Canadian Advanced Building Materials Application	Dec 1994	Taipei, Taiwan	DFAIT	(613) 996-7582
Building Materials/Construction Technology	Mar 1995	Canada*	DFAIT	(613) 995-8705
Japan				
3-Story Apartment Video Project	TBD*	Japan*	DFAIT	(613) 995-1678
Building Products Mission	Apr 1994	Canada*	DFAIT	(613) 995-1678
Canadian Housing Solo Show	Jun 1994	Osaka, Japan	DFAIT	(613) 995-1678
Kobe Interhome Fair '94	Jun 1994	Kobe, Japan	DFAIT	(613) 995-1678
Canada-Japan Steel Industry Research Symposium	Aug 1994	Toronto, Ontario	Industry Canada	(613) 954-3122
Building Product Shows	Sep 1994	Sapporo, Japan Sendai, Japan	DFAIT	(613) 995-1678
Kansai Building Products	Sep 1994	Canada*	DFAIT	(613) 995-1678
Tokai 2x4 Association Meeting	Sep 1994	Japan*	DFAIT	(613) 995-1678
Tokai Building Products	Sep 1994	Canada*	DFAIT	(613) 995-1678
Forestry Industry Buyers	Oct 1994	Canada*	DFAIT	(613) 995-1678
Japan Home Show — Construction Materials	Nov 1994	Canada*	DFAIT	(613) 995-1678
Japan Stone Fair '94	Nov 1994	Chiba, Japan	NRCan	(613) 992-5474
Kansai Building Products	Nov 1994	Osaka, Japan	DFAIT	(613) 995-1678
Prefab Housing Mission	Jan 1995	Japan*	DFAIT	(613) 995-1678
Building Products Solo Show	Feb 1995	Fukuoka, Japan	DFAIT	(613) 995-1678
Prefab Housing/Panel Users/Investors/Buyers Mission	Mar 1995	Canada*	DFAIT	(613) 995-1678
Space Prepayment Japan Home Show '95	Mar 1995	Japan*	DFAIT	(613) 995-1678
Latin America and the Caribbean				
Expomin '94	May 1994	Lima, Peru Buenos Aires, Argentina Belo Horizonte, Brazil	DFAIT	(613) 996-5358
Asbestos Mission to Latin America	Sep 1994	Cancun, Mexico	NRCan	(613) 992-3258

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
Expo Cihac '94	Sep 1994	Guatemala* Dominican Republic*	DFAIT	(613) 996-6129
Summit '94 (Wood Expo)	Sep 1994	Vancouver, B.C. Toronto, Ontario Montreal, Quebec Edmonton, Alberta	DFAIT	(613) 996-4199
Coal and Electricity Seminar in Mexico	Oct 1994	Mexico City, Mexico	NRCan	(613) 992-2018
Constructo '94	Oct 1994	Monterrey, Mexico	DFAIT	(613) 996-4199
Venezuelan Gold Symposium '94	Oct 1994	Caracas, Venezuela	DFAIT	(613) 996-5548
Mining Equipment Services	Dec 1994	Mexico*	DFAIT	(613) 996-8625
Multiple Markets				
International Standard Test Methods for Reduction of Iron Ore Pellets and their Properties	TBD*	Quebec* or Newfoundland*	NRCan	(613) 992-8179
Investment Promotion Seminars	TBD*	Europe* Asia*	NRCan	(613) 995-5301
Organisation for Economic Co-operation and Development (OECD) Steel Committee	Apr 1994	Paris, France	Industry Canada	(613) 954-4241
International Nickel Study Group	Apr 1994	The Hague, Netherlands	NRCan Industry Canada	(613) 992-4481 (613) 954-4241
International Lead-Zinc Study Group	Apr 1994 Fall 1994	London, England Vienna, Austria	NRCan Industry Canada	(613) 992-4403 (613) 954-4241
International Ad Hoc Committee on Aluminum, Alumina and Bauxite	May 1994	Geneva, Switzerland	Industry Canada	(613) 954-4241
International Copper Study Group	May 1994	Lisbon, Portugal	Industry Canada	(613) 954-4241
United States				
Low-Cost Housing Study	TBD*	New York City, New York	DFAIT	(613) 944-7486
Kitchen and Bath Show	Apr 1994	Chicago, Illinois	DFAIT	(613) 944-7486
New Exporters to Border States (NEBS) Mission to Kitchen & Bath Show	Apr 1994	Chicago, Illinois	DFAIT	(613) 944-7486
Incoming Mission of Home Depot Buyers	May 1994	Toronto, Ontario	DFAIT	(613) 944-7486
Mission from Chicago — Home Depot Buyers Toronto	May 1994	Toronto, Ontario	DFAIT	(613) 944-7486

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
Tenth and Eleventh Working Group Meeting of the NRCan Mining Sector and U.S. Bureau of Mines	May 1994 Nov 1994	Toronto, Ontario Washington, D.C.	NRCan	(613) 992-9571
Pacific Coast Builders Show	Jun 1994	San Francisco, California	DFAIT	(613) 944-7486
National Hardware and Building Products Show	Aug 1994	Chicago, Illinois	DFAIT	(613) 944-7486
Atlanta Building Product Market Study	Oct 1994	Atlanta, Georgia	DFAIT	(613) 944-7486
Remodelers Show	Oct 1994	Atlanta, Georgia	DFAIT	(613) 944-7486
Incoming Mission from New York to Canadian Door & Window Industry	Dec 1994	Canada*	DFAIT	(613) 944-7486
Canada House Management/National Association of Home Builders of the U.S. (NAHB)	Jan 1995	TBD*	DFAIT	(613) 944-7486
Canadian Hardware Show	Jan 1995	Vancouver, B.C.	DFAIT	(613) 944-7486
Mission from Atlanta, Building Product	Jan 1995	Vancouver, B.C.	DFAIT	(613) 944-7486
Mission to Canadian Hardware Show	Jan 1995	Canada*	DFAIT	(613) 944-7486
NAHB Houston	Jan 1995	Houston, Texas	DFAIT	(613) 944-7486
NAHB, Trade Fair	Jan 1995	Houston, Texas	DFAIT	(613) 944-7486
Seattle Building Products	Mar 1995	Seattle, Washington	DFAIT	(613) 944-7486

Western Europe and European Community

Canada/EC Metals and Minerals Group	May 1994	Toronto, Ontario or Ottawa, Ontario	NRCan	(613) 995-2096
Outgoing Construction Mission	May 1994	TBD*	DFAIT	(613) 995-6440
International Copper Study Group	May 1994	Lisbon, Portugal	NRCan	(613) 992-4482
Incoming Construction Buyers Mission	Jun 1994	Calgary, Alberta	DFAIT	(613) 995-6440
Canada/EC Seminar on the Environment and the Metals and Mining Industry	Sep 1994	Brussels, Belgium	NRCan	(613) 992-2096
Timber Frame Housing Seminars (Building Products)	Sep 1994	TBD*	DFAIT	(613) 995-6440
Wood Building Products (New Exporters to Overseas Markets — NEXOS) Mission to Building '94 and Information Booth	Sep 1994	Istanbul, Turkey Ankara, Turkey	DFAIT	(613) 996-5263
Building '94	Sep 1994	Ankara, Turkey	DFAIT	(613) 996-5263
Bouwbeurs '95	Jan 1995	Utrecht, Netherlands	DFAIT	(613) 995-6440
Batibouw '95	Jun 1995	Brussels, Belgium	DFAIT	(613) 995-6440

* Exact dates and/or cities to be determined.

Canada's International Trade Business Plan is made up of three key components: a Strategic Overview, a series of industry sector strategies, and an accompanying series of international activities lists. Industry sectors available include:

1. Advanced Manufacturing Technologies
2. Aeronautics
3. Agri-Food Products
4. Arts and Cultural Industries
5. Automotive
6. Biotechnologies
7. Business and Professional Services
8. Chemicals and Plastics
 - Chemicals and Petrochemicals
 - Plastics and Polymer Products
9. Consumer Products
 - Apparel Industry
 - Business and Institutional Furniture
 - Footwear
 - Hardware and Housewares
 - Household Furniture
 - Sporting Goods (including recreational watercraft)
 - Textiles
10. Defence and Related Products
 - Aviation, Marine and Defence Electronics
 - Marine and Land Defence Systems
11. Electrical and Energy Equipment
 - Electrical Equipment
 - Oil and Gas Field Equipment
12. Environmental Industries
13. Fish and Seafood Products
14. Forest Industries
15. Industrial Technologies
 - Agricultural Technology, Machinery and Equipment
 - Mining — Forestry — Pulp and Paper
 - Ocean and Marine Shipboard Technology
16. Information Technologies
17. Medical and Health-care Products
18. Minerals, Metals, Advanced Materials and Construction Products
19. Space
20. Tourism
21. Urban Transit and Rail

For information on how to receive the Strategic Overview, or additional industry sector strategies and international activities lists, please call: **1-800-267-8376**



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Canada's International Trade Business Plan

1994-1995

***An Integrated Plan for Trade, Investment
and Technology Development***



Doing Business Abroad

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HYA 4817

Space

The space industry includes providers of goods and services that generally are part of larger space systems, including satellites, ground stations (that manage space-based assets) and launch/propulsion systems. It also includes, when appropriate, a wide range of service providers (such as geomatics and telecommunications firms) who make use of space-related assets to produce other products.

International Environment

The world space industry activity is estimated at over US\$55 billion. It is concentrated in the U.S. (68 percent), Russia (14 percent), Europe (11 percent) and Japan (3 percent).

Government defence and civilian programs account for fully 94 percent of the space market worldwide. The defence portion is difficult to estimate, but is believed to be slightly less than civilian spending. For national security reasons, most governments try to procure equipment from domestic firms and use the space program as a vehicle for national industrial and scientific development.

Military space programs are among the few still growing in the U.S. and Europe. Surveillance, command, control and communications via satellite have continued to rise in importance since the early 1980s, and especially since the Gulf war. On the other hand, due to the end of the cold war, defence spending is on the decline in many markets. As a result of rationalization, many marginally profitable firms are being taken over by larger, more diversified firms; defence space firms are looking to the civilian space arena; and strategic alliances are being formed to lower R&D costs and improve market access. While the former U.S.S.R. was not an active participant in the international space market, Russia has the interest and potential to be a major player.

The high cost of R&D has also contributed to the internationalization of major space programs, characterized by the establishment of new or stronger links between space companies in different markets or trading blocs. For example, the

European Space Agency (ESA) is a key vehicle for cooperation in space projects for its 15 members, including Canada. The U.S.-led International Space Station (ISS) is currently a cooperative effort among ESA, Japan and Canada, and soon may include Russia.

The use of space for commercial purposes is growing and evolving. Space-based communications is the most commercial space activity, relying on government support only for some R&D and advanced technology development. Although there is a commercial market for remotely sensed data, and the reception and processing equipment needed to acquire it, remote sensing does not yet generate sufficient returns to cover the cost of remote-sensing satellites, which are usually procured by governments.

Communications

Satellite communications is driven by the rapidly growing \$600-billion annual demand for communications services including telephony, data transmission, cable and broadcast services. In 1992, commercial satellite systems operators and transponder brokers earned roughly \$4.4 billion from sales of satellite-based communications services, 34 percent of which was in the U.S.

The world civilian market for satellite communications space-based equipment is forecast at roughly \$1.4 billion annually, declining slightly in the late 1990s for a 10-year market of approximately \$12 billion to \$13 billion. Past market shares for geostationary communications satellites are estimated at U.S. 30 percent, Europe 25 percent, and other parts of the world 45 percent. In the future, the U.S. market is

expected to shrink in importance to roughly 20 percent in favour of the overseas markets.

The world civilian market for satellite communications ground segment equipment is estimated at \$2.5 billion to \$2.9 billion. It is growing at an annual compound rate of 7 percent.

The military satellite communications space and ground segment market is about equal in size but is heavily protected and dominated by the U.S., with \$2.1 billion budgeted for 1992.

Positive trends include rising demand for:

- space-based, mobile, personal communications and direct broadcast or direct-to-home satellite communications, and
- Very Small Aperture Terminal (VSAT) networks in North America for business networks and in countries where the terrestrial telephony infrastructure does not exist.

Both the civil and military markets for space segment equipment are dominated by the U.S. Two thirds of the world's geostationary satellite systems (excluding those of the former U.S.S.R.) were supplied by three U.S. companies. Canada supplies less than 3 percent of the world market for civil geostationary satellite systems.

Remote Sensing

Satellite-based remote sensing is increasingly able to service the rapidly growing market for geographically based information used by natural resource managers. A greater concern with the environment, and the need to obtain information over large areas in a cost-effective way, will strengthen the already rapid growth of this sector.

The space segment of remote sensing consists of meteorological satellites (which had a fairly constant market at about \$600 million per year between 1986 and 1992) and earth observation satellites (which had a market growth from about \$325 million to \$800 million per year between 1986 and 1992). Although space budgets are under pressure around the world, the importance of satellite data for understanding environmental

problems continues to shield this portion of national budgets from significant cuts.

While the recent growth rate of remote-sensing satellite construction is not expected to continue, the stage has been set for considerable future activity in the ground segment and in the user community (hardware, software, processed data, education, consulting). The market will be in equipment to receive data and in activities which add value to the data, i.e., services and equipment that convert data to usable information.

Space Station

The ISS program, led by the U.S. and involving Canada, Japan and ESA, is projected to cost about \$30 billion, with Canada's share at about \$1.4 billion (construction only). The ISS is currently undergoing a major design review in order to reduce costs and Russia has been invited to be a partner in order to make use of its considerable space assets.

Space Science

Annual spending on space science by the U.S., ESA and Japan runs at about \$3 billion, with Canada spending about \$25 million per year. Programs are invariably sponsored by governments. Market opportunities are for the provision of specialized equipment.

Canadian Position

The space industry in Canada employed an estimated 4 000 people and generated sales of \$620 million in 1991. Seven companies recorded space-related sales in excess of \$10 million and accounted for over 85 percent of industry sales, with Spar Aerospace representing over half of total industry sales and employment. The majority of the companies in the industry are Canadian-owned.

The Canadian space industry is comparable to that of most other industrialized countries in terms of per capita sales and employment. It exports a larger proportion of its total production

than any other major space-faring country. Exports have grown from about \$10 million in 1977 (17 percent of sales) to an estimated \$230 million in 1991 (37 percent of sales). As major Canadian space programs started to wind down in 1993, the ratio of exports was expected to increase.

Many Canadian companies are niche players, with specialized areas of expertise. Examples are COM DEV's multiplexers/switches; SED/Calian's telemetry, tracking and control equipment; MPR Teltech's ground station network technology; MPB Technologies's expertise and unique capabilities in space photonics; CAL Corporation's mobile satellite aeronautical equipment and in remote sensing; MacDonald, Dettwiler and Associates (MDA) earth stations; and Intera's aerial radar mapping. COM DEV, MDA and Intera are world leaders in their respective fields.

Spar Aerospace, as the prime contractor for the Canadian space program, has developed systems integration skills and payload capability. As well, Spar produces and exports satellite subsystems such as antennas, solar panels and electronic systems. Spar is pursuing world markets for end-to-end communications satellite systems including both the space and ground segment. It is also pursuing new opportunities in small satellites and remote-sensing instruments.

In communications, the challenge for the industry is how to exploit the space and ground segments of fixed satellite-based, overseas telephony markets, and how to market both hardware (space and ground) and service segments of the new global mobile networks. Canada's lead role in developing the *Mobile Communication Satellite (MSAT)* has positioned industry to pursue the rapidly growing mobile satellite communications products and services market.

Market opportunities in remote sensing are related to ground equipment, software and value-added services for both radar and optical data. Canadian firms are already established world leaders, based on optical data, in ground station

and processing system design as well as in value-added products and services. MDA has provided systems for 80 percent of the present installed base of remote-sensing reception facilities worldwide. Canadian companies lead the development of value-added products and services, and now supply about 10 percent of the world market, with value-added sales of about \$85 million in 1993, estimated to grow to \$240 million by 1998.

At present, all remote-sensing data is provided by satellites of other countries, but when *RADARSAT* is launched in 1995 Canada will become a remote-sensing satellite operator. *RADARSAT* data will be marketed internationally by Radarsat International, which has already begun to negotiate reception agreements with ground station operators, usually government-funded national facilities. *RADARSAT* provides the opportunity for Canadian industry to maintain and further its lead in the expected large world markets for receiving, analyzing and interpreting radar data. Canadian expertise in natural resource management, environmental monitoring, mapping and remote sensing can be a valuable tool to increase sales of related products and services.

In space robotics, Canada has developed some unique capabilities. There are huge emerging markets for the handling of contaminated waste which require specialized hardware and software systems. While space robotics hardware is not appropriate for terrestrial applications, the merging of space software with existing terrestrial hardware could place Canada in an advantageous position. The U.S. represents a near-term market (some \$20 billion over 20 years), but similar requirements will eventually emerge in eastern Europe. Although large opportunities in space for space robotics (i.e. satellite servicing) will likely emerge, market size is unquantifiable and at least 10 years away.

National preferences dominate space-science activities. Canadian government participation in foreign programs is usually required to obtain work for Canadian companies. Bristol Aerospace

is an exception, exporting 95 percent of their sounding rockets for space science experiments, mainly to the U.S.

While a few Canadian space firms are world players, the small size of the domestic market places them at a major disadvantage in marketing high-volume products where cost is the critical factor. The biggest obstacles to continuing Canadian success in space hardware manufacturing are insufficient capitalization in comparison to the multibillion dollar scale of new global mobile satcom programs, and the corresponding size of the companies participating.

There are some options for our firms. Space companies worldwide are increasingly using strategic alliances, teaming arrangements and joint ventures to gain access to markets, technologies and the financial resources to undertake large projects. Canadian companies need to expand their use of such arrangements in order to compete in a world space market dominated by a few giants.

Canada's strengths lie in system and component design and integration; knowledge-intensive as opposed to mass-produced hardware; and complete information and/or communications solutions.

Critical factors for continued export success include:

- the formation of international alliances/partnerships (often requiring government-to-government agreements)
- innovative, government-supported export financing
- stable, continuing government investment in the development of new emerging technologies.

Strategic Direction

Industry-government consultations have concluded that key marketing priorities will include:

- *satellite communications*, particularly prepositioning for the developing mobile

market; while exploiting fixed satellite-based, overseas telephony markets

- *ground segment equipment*, both in communications and remote sensing
- *remote sensing*, specifically coordinating Canadian efforts to sell *RADARSAT* data, reception facilities and value-added products and services
- *small satellites*, assessment of the market for small satellites, suggested as a possible major growth area in the coming decade.

Reacting to a clear and obvious need for greater coordination of export marketing activities among government departments and between government and industry, in 1992 DFAIT and Industry Canada jointly created a committee called the Interdepartmental Working Group on International Trade in Space-Related Products. This group includes all interested federal departments; other agencies including the Canadian Space Agency, CIDA and EDC; and the largest space companies. In May 1993, the industry members of the working group met separately to achieve a consensus on priority markets.

Based on their estimates of market growth, Canadian prospects, access considerations and market size, the industry group identified the following as the top three areas requiring extra effort: Russia/eastern Europe; China; and the Pacific Rim (the Republic of Korea, Thailand, Singapore, Taiwan, Indonesia, Malaysia, Vietnam and Hong Kong). These are followed by Mexico and Latin America; and the Middle East. The industry group felt that the U.S., Europe and Japan continue to be of key interest, but at the existing level of effort. Expanded involvement with the national space authorities in all these countries remains a priority.

The Working Group also strongly recommends that the following be implemented in order to have maximum impact at major trade shows abroad for the largest number of potential Canadian exporters; ensure that:

- Canada's space-related trade promotion activities abroad are carried out under a kind of "Canada Inc." umbrella, with the Canadian Space Agency playing a much more active role as lead agency
- trade fairs and missions in the space sector are organized and directed at specific priority markets, with specific objectives in mind
- small and medium-sized enterprises (SMEs) are properly consulted and invited to participate in all promotional activities
- there is greater sharing of market information and intelligence between posts abroad and industry, and possibly between large-sized exporters (LSEs) and SMEs (this could include how to do business in country X, sharing information on risk assessments, local agents and financing alternatives, and joint marketing alliances).

To properly assess markets and plan promotional activities, more detailed information/intelligence is required for various priority markets.

ACTION ITEM: For each priority non-U.S. market, DFAIT, Industry Canada and the Canadian Space Agency will work together and with posts abroad to document:

- "a guide on how to do business in the space sector in country X" that includes a summary of the current national space programs
- a list of the key contacts in the national space and space-related agencies and the public and private space firms and research labs
- a guide on how Canadian companies should proceed in order to get business or seek out partnerships in that country
- information on the sources of general or specific market research and intelligence on the space sector that would help Canadian companies better understand the economic, political and industrial aspects of each country.

As well, space firms will be invited to participate in a potential Asia-Pacific Technology Image Initiative to improve Canada's image in this part of the world as a supplier of advanced products and services. The Working Group will seriously assess the merits of a Canadian space mission to Japan to follow up on previous initiatives. For Europe, specific initiatives will be directed at pursuing technology exchanges or joint-venture arrangements with countries that complement Canadian expertise, especially Germany, France, Italy and Spain.

For the U.S. market, due to problems Canadian firms traditionally have had selling directly to NASA, the main thrust of Canadian government and industry efforts will be directed at major U.S. prime contractors and other suppliers to NASA. Each Canadian consulate in the U.S. will therefore be asked to undertake visits to any NASA centre and NASA prime contractors in its territory to identify possible subcontract opportunities for Canadian firms. Based on such visits, each consulate will be asked to provide the names of the key people and major programs of interest to Canada at NASA centres and major NASA suppliers in their territory, and to recommend specific ways for Canadian suppliers and consulates to follow up and promote their capabilities (i.e. vendor days, Canada days, in-house technical presentations/seminars, or upcoming trade fairs/missions).

Contacts

Sectoral Liaison Secretariat
Department of Foreign Affairs and
International Trade
Tel.: (613) 996-4875
Fax: (613) 944-0050

Space Directorate
Space, Marine and Defence Branch
Industry Canada
Tel.: (613) 954-3299
Fax: (613) 954-4246

Space

Activity	Date	Location	Dept.	Contact
East Asia				
Satellite Remote Sensing Simulation S/W Seminar	May 1994	Taipei, Taiwan	DFAIT	(613) 996-4875
STAE '94 and Mission	Sep 1994	Beijing, China	Industry Canada	(514) 926-4342
Japan				
Japan International Aerospace Exhibition '95 (JA '95)	Feb 1995	Tokyo, Japan	DFAIT	(613) 995-8596
United States				
Space Equipment Manufacturers to National Aeronautics and Space Administration (NASA) and NASA Primes	Jun 1994	Washington, D.C.	DFAIT	(613) 944-9481
Space Mission to U.S. Primes	Jun 1994	Los Angeles, California	DFAIT	(613) 944-9481
Western Europe and European Community				
Aeronautic & Space Mission	May 1994	Paris, France Toulouse, France	DFAIT	(613) 996-4875

Canada's International Trade Business Plan is made up of three key components: a Strategic Overview, a series of industry sector strategies, and an accompanying series of international activities lists. Industry sectors available include:

1. Advanced Manufacturing Technologies
2. Aeronautics
3. Agri-Food Products
4. Arts and Cultural Industries
5. Automotive
6. Biotechnologies
7. Business and Professional Services
8. Chemicals and Plastics
 - Chemicals and Petrochemicals
 - Plastics and Polymer Products
9. Consumer Products
 - Apparel Industry
 - Business and Institutional Furniture
 - Footwear
 - Hardware and Housewares
 - Household Furniture
 - Sporting Goods (including recreational watercraft)
 - Textiles
10. Defence and Related Products
 - Aviation, Marine and Defence Electronics
 - Marine and Land Defence Systems
11. Electrical and Energy Equipment
 - Electrical Equipment
 - Oil and Gas Field Equipment
12. Environmental Industries
13. Fish and Seafood Products
14. Forest Industries
15. Industrial Technologies
 - Agricultural Technology, Machinery and Equipment
 - Mining — Forestry — Pulp and Paper
 - Ocean and Marine Shipboard Technology
16. Information Technologies
17. Medical and Health-care Products
18. Minerals, Metals, Advanced Materials and Construction Products
19. Space
20. Tourism
21. Urban Transit and Rail

For information on how to receive the Strategic Overview, or additional industry sector strategies and international activities lists, please call: **1-800-267-8376**



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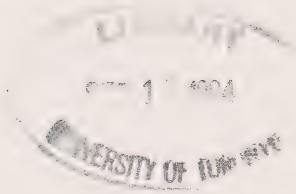
Canada's International Trade Business Plan

1994-1995

***An Integrated Plan for Trade, Investment
and Technology Development***



Doing Business Abroad



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UVA 8330

Tourism

The tourism industry supplies goods and services to business and pleasure travellers. As such, the industry comprises to varying degrees, sectors and subsectors of other industries: accommodation, passenger transportation, travel agencies, tour operators, recreation and amusement, rental and private cars, food services and retail trade.

International Environment

Since the 1950s, tourism has emerged as one of the world's most important growth industries. Currently, it is a \$2.65 trillion industry world-wide. The World Tourism Organization predicts that international trips will grow at an annual rate of 4 percent in the 1990s — a significantly lower rate than in the past. This slowdown, together with the growing availability of tourism products and services, has dramatically escalated international competition for travel revenue.

Western Europe is the most important tourist destination, with receipts of US\$61.1 billion (see Figure 1). North America is the second-largest market, capturing US\$55.4 billion in receipts. Significant emerging markets to generate revenue are the Republic of Korea, Taiwan, Brazil and Argentina.

Throughout the 1990s, travel within Europe is expected to continue to expand. Rapid growth in traffic from Europe to North America (via the North Atlantic) is also expected. At the same time,

trips within the Asia-Pacific region, as well as between Europe and Asia, are expected to increase significantly.

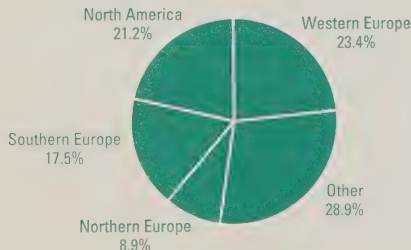
In recent years, the industry has shifted from its traditional focus on market growth to capturing market share. New entrants to the global tourism industry have significantly increased competition among countries for tourist dollars. The tourism market is now demand, rather than supply-driven. Travellers have become more sophisticated, value-conscious and discriminating in their choice of destinations, thereby forcing suppliers and producers to offer quality, competitively priced tourism products and services. Issues such as competitiveness, productivity, the use of technology, strategic partnering, transportation accessibility and sustainable tourism development, have a major impact on a country's ability to maintain and develop market share.

Canadian Position

The performance of the tourism industry has a significant impact on Canada's economy. In Canada, tourism is a \$28-billion industry that accounts for 4 percent of GDP and 5 percent of employment, generating about 550 000 jobs. In 1992, tourism ranked fourth among Canada's exports generating \$8 billion, after motor vehicles (\$28 billion), auto parts (\$10 billion) and business services (\$9 billion).

Canada's tourism industry is the ninth-largest in the world, with receipts of US\$5.5 billion and 2.12-percent share of the world market in 1991. The industry's annual 8.8-percent growth rate in the 1980s was surpassed only by the U.S. and Australia among OECD countries. Yet, like many

Figure 1 — Top Tourist Destinations (Percent Share)



Source: World Tourism Organization, *Yearbook of Tourism Statistics*, 1993.

other industrialized countries, Canada runs a deficit on its travel account. The deficit has grown from \$2.9 billion in 1988 to \$8.2 billion in 1992. This has been caused largely by a rapid growth in travel to the U.S. At the same time, the growth in receipts has been constrained by minimal growth in receipts from the U.S.

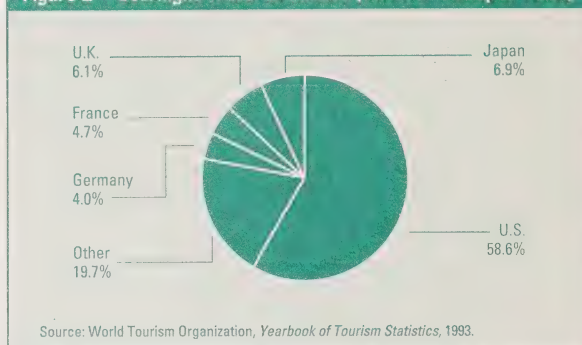
Canada's tourism industry has identifiable strengths and weaknesses. Among its strengths are its reputation for beautiful scenery, wide open spaces and clean environment; its tourism products, outdoors, cities and resorts; its location close to the most important market in the world; and tourists' perception of the value they will get for their money. Its weaknesses include limited market intelligence; some substandard facilities; less creative product packaging; restricted air access to the U.S.; and many entry-level, low-wage jobs and poor productivity.

Adapting its products and services to the demands of the discriminating international traveller is one of the major challenges facing Canada's tourism industry. Other issues affecting the industry are the needs to secure sufficient transportation links and to overcome skill shortages and productivity problems. Better integration of public and private efforts is needed.

The U.S. Market

Canada's five major international markets are the U.S., Japan, the U.K., France and Germany (see Figure 2). The U.S. market is by far the most important; it provides Canada with 80 percent of its international visitors (11.8 million overnight tourists) and 58 percent of its revenues (\$3.7 billion excluding same-day trips). The number of overnight trips by U.S. residents to Canada is forecast to grow by only 0.5 percent in 1993 and by 1.5 percent in 1994. Nonetheless, it will remain Canada's dominant source of international visitors and international tourism revenue well into the future. The U.S. provides Canada with four times as many visitors as do all overseas markets combined.

Figure 2 — Overnight Travel to Canada (Share of Receipts 1992)



The challenge facing the Canadian tourism industry is to supply the U.S. market with differentiated, high-value products that meet the expectations of an aging, increasingly sophisticated, experienced and cosmopolitan customer. At the same time, competition from other destinations, both in the U.S. and abroad, is increasing as the availability of tourism products and services continues to expand.

The European Market

Among the European markets, the U.K. is currently the most important to Canada, while France is the fastest-growing market, outpacing growth in all of Canada's international markets. In Germany, Canada ranks second to the U.S. as a preferred long-haul destination.

In 1992, 1.7 million European tourists visited Canada, generating \$1.4 billion in receipts. The three primary European markets, the U.K., France and Germany, generate 68 percent of all revenues. The next four markets, Italy, Switzerland, the Netherlands and Belgium, generate 15 percent of the revenue, while tertiary markets of Spain and Sweden generate 5 percent of the revenue.

The competition to capture a larger share of the growing long-haul European markets has intensified significantly over the past five years. New destinations, particularly in the Asia-Pacific

region, have significantly increased their presence in the European markets. In addition, available air-access services and relatively low travel costs have led to the U.S. becoming an increasing popular travel destination for Europeans.

The Asia-Pacific Market

In the Asia-Pacific market, Japan remains dominant. In 1992, it provided 392 300 tourists, and \$434 million in receipts, second only to the U.K. in overseas arrivals, and the U.S. in receipts. Canada's current share of the Japanese outbound market is 3.3 percent. Overnight visits by Japanese are forecast to grow by 1.2 percent in 1993 and by 2.5 percent in 1994. Japan is expected to become the leading source of tourists to long-haul destinations by the end of the decade.

Generating tourism receipts of \$64.1 million in 1992, up from \$54.8 million in 1991, Taiwan has been identified as a priority emerging market. Although visitor arrivals have declined somewhat, the Republic of Korea is in the same category and tourism receipts continue to grow, reaching \$28.8 million in 1992. As mature secondary markets, both Hong Kong and Australia continue to be important sources of revenue. Growth in arrivals averaged 3 percent since 1988 with revenues reaching \$57.6 million in 1992, up 10.5 percent over 1991. Mexico also has recently become prominent as an important travel market for Canada.

Preliminary research has identified young professional women in both Taiwan and the Republic of Korea as the greatest potential clients for high-yield travel. New pleasure-travel market studies for Australia and Taiwan will provide more detailed categorization of high-yield customers. Additional research on the Hong Kong market will identify customers other than those who travel for immigration and investment purposes.

The Business Travel Market

Business travel to Canada accounted for \$1.4 billion in 1992 or 18 percent of international travel revenues. It represents an especially lucrative market for Canada in the U.S. because of that country's proximity and its position as the primary generator of international business meetings, conventions and incentive travel. Canada's major competitive advantage in the U.S. market is its service infrastructure and customer-service orientation. Customs, taxation and air-accessibility issues remain obstacles, as does the magnitude of marketing investment needed in this highly competitive market.

Strategic Direction

The objective of Canada's tourism strategy is to support and promote the international competitiveness of the Canadian tourism industry so that it can become more profitable and generate increased revenue and employment for Canada. This will be pursued through direct programming and through partnered, integrated efforts and expenditures involving the federal, provincial and territorial governments and the private sector (both Canadian and foreign).

The government, in cooperation with industry, will undertake to:

The U.S. Market

- target marketing activity and funds on specific affluent, high-yield, long-haul market segments, in the following proportions: seniors (55 percent of budget); working middle-aged (25 percent); older baby boomers (15 percent); and younger baby boomers (5 percent).

This will contribute to an increase in U.S. tourism-leisure receipts from \$2.8 billion in 1992 to \$3.2 billion in 1994. (Industry Canada)

The European Market

- focus on partnered activities with an integrated marketing message; refocus messages away from general awareness towards specific travel experiences; concentrate on culture, nature and outdoor activities; and continue market research to assess consumer travel patterns and to match them with Canadian products.

This will contribute to an increase in visits of 8 percent (to 2 million visits) and receipts of 10 percent (to \$1.5 billion). (Industry Canada)

The Asia-Pacific Market

- position Canada as a high-quality, four-season travel destination
- develop marketing partnerships
- employ direct marketing techniques and extend marketing activities to new locales
- target product-specific messages to high-yield customer segments identified by research.

This will contribute to an increase in Canada's tourism receipts of 5 percent from Japan (to \$490 million) and 6 percent from other Asia-Pacific markets (to \$377 million) in 1994.

The Business Travel Market

- target marketing activities to create positive perceptions of Canada as a destination of choice for meetings
- focus resources at the customer level through relationship marketing
- address the specific needs and expectations of individual organizations
- identify new business opportunities.

This will help increase the U.S. meetings market contribution to Canada's tourism receipts by \$75 million (from \$740 million in 1992 to \$815 million in 1994).

Contact

Tourism
Industry Canada
Tel.: (613) 954-3830
Fax: (613) 952-7906

Tourism

Activity	Date	Location	Dept.	Contact
Africa and the Middle East				
Incoming Mission Rendez-Vous Canada Travel Show	May 1994	Canada*	DFAIT	(613) 944-6994
Asia Pacific South				
Rendez-Vous Canada	May 1994	Canada*	DFAIT	(613) 995-7652
Holiday & Travel Show	Jun 1994	Sydney, Australia	DFAIT	(613) 995-7652
Corroboree	Jan 1995	Sydney, Australia	DFAIT	(613) 995-7652
AIME	Mar 1995	Sydney, Australia	DFAIT	(613) 995-7652
Central Eastern Europe and the Commonwealth of Independent States				
GO '94 International Travel Fair	Jan 1995	Brno, Czech Republic	Industry Canada	(613) 954-3838
East Asia				
Canadian Tourism Training Course	Apr 1994	Taipei, Taiwan	DFAIT	(613) 995-8705
Incentive Travel Survey	May 1994	Taipei, Taiwan	DFAIT	(613) 995-8705
Rendez-Vous Canada	May 1994	Taipei, Taiwan	DFAIT	(613) 995-8705
Visit Western Canada Program	May 1994	British Columbia* Alberta*	DFAIT	(613) 995-8705
Chinese Language Guide Book	Jun 1994	Taipei, Taiwan	DFAIT	(613) 995-8705
Tourism Market Study	Jul 1994	Hanoi, Vietnam	DFAIT	(613) 995-8705
Asian Sales Mission	Sep 1994	Taiwan* Republic of Korea*	Industry Canada	(613) 954-3915
Visit Eastern Canada Program	Sep 1994	Ontario* Quebec*	DFAIT	(613) 995-8705
Visit Western Canada Program	Sep 1994	British Columbia* Alberta*	DFAIT	(613) 995-8705
Showcase Canada '94	Oct 1994	Taipei, Taiwan	DFAIT	(613) 995-8705
Canadian Tourism Training Course (for Wholesalers)	Nov 1994	Taipei, Taiwan	DFAIT	(613) 995-8705
Canadian Tourism Training Course	Dec 1994	Taichung, Taiwan	DFAIT	(613) 996-6987
Canadian Tourism Training Course	Feb 1995	Kaohsiung, Taiwan	DFAIT	(613) 996-6987
Japan				
Kansai Retail Travel Show	Sep 1994	Japan*	DFAIT	(613) 995-8596
Kanata Annual Marketplace	Oct 1994	Japan*	Industry Canada	(613) 954-3963

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
Latin America and the Caribbean				
Tecnotur '94	May 1994	Havana, Cuba	DFAIT	(613) 996-6129
Tourism Supplies Mission	May 1994	Canada*	DFAIT	(613) 996-8625
Tourism Development Mission	Nov 1994	Mexico* Central America*	DFAIT	(613) 996-8625
Multiple Markets				
Rendez-Vous Canada	May 1994	Toronto, Ontario	Industry Canada	(613) 954-3970
FAM-Familiarization Tour	Oct 1994	Ontario*	DFAIT	(613) 996-5263
United States				
Federal Business Travel Program	TBD*	U.S.*	Industry Canada	(416) 973-5075
Adventure Canada	Apr 1994	Seattle, Washington	DFAIT	(206) 443-1777
Canada Products Newsletter	Apr 1994	Los Angeles, California	DFAIT	(213) 687-7432
Canada Salutes U.S. Seniors (4 Seminars)	Apr 1994	Detroit, Michigan	DFAIT DFAIT	(313) 567-1704 (313) 567-2340
Snapshots Canada (Newsletter)	Apr 1994	Washington, D.C.	DFAIT	(202) 682-1740
Spotlight Canada	Apr 1994	Pittsburgh, Pennsylvania	DFAIT	(412) 392-2308
Canada Products Promotion	Sep 1994	Chicago, Illinois	DFAIT	(312) 616-1860
Spotlight Canada	Sep 1994	Detroit, Michigan Los Angeles, California	DFAIT DFAIT	(313) 567-2340 (213) 687-7432
Incentive Travel & Meetings Executive Show (IT&ME)	Sep 1994	Chicago, Illinois	Industry Canada	(416) 973-5081
Adventure Canada	Oct 1994	Dallas, Texas	DFAIT	(214) 922-9806
Dateline Canada	Oct 1994	Los Angeles, California	DFAIT	(213) 687-7432
Golf Canada (2 Shows)	Oct 1994	Detroit, Michigan	DFAIT	(313) 567-2340
New Exporters to Border States (NEBS) (Adventure)	Oct 1994	Boston, Massachusetts	DFAIT	(617) 262-3760
Society of American Travel Writers	Oct 1994	Ireland*	DFAIT DFAIT DFAIT	(213) 687-7432 (214) 922-9806 (212) 596-1600
Spotlight Canada (Rail & Ferry)	Oct 1994	Seattle, Washington	DFAIT	(206) 443-1777

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
Adventure Canada (Outdoor)	Nov 1994	Washington, D.C.	DFAIT	(202) 682-1740
Canada Products Seminar	Nov 1994	Miami, Florida Pittsburg, Pennsylvania	DFAIT DFAIT	(305) 579-1600 (412) 392-2308
Canada Salutes U.S. Seniors	Nov 1994	Boston, Massachusetts	DFAIT	(617) 262-3760
NEBS (Adventure)	Nov 1994	Seattle, Washington	DFAIT	(206) 443-1777
Canada Salutes U.S. Seniors	Dec 1994	Atlanta, Georgia	DFAIT	(404) 577-6810
Cruise Canada Seminar	Dec 1994	Miami, Florida	DFAIT	(305) 579-1600
Spotlight Canada	Dec 1994	Cincinnati, Ohio Dallas, Texas	DFAIT DFAIT	(513) 762-7655 (214) 922-9806
Canada Salutes U.S. Seniors	Jan 1995	Dallas, Texas	DFAIT	(214) 922-9806
Spotlight Canada	Jan 1995	New York City, New York Miami, Florida Cincinnati, Ohio Minneapolis, Minnesota	DFAIT DFAIT DFAIT DFAIT	(212) 596-1600 (305) 579-1600 (513) 762-7655 (612) 333-4641
Canada Products Seminar	Feb 1995	Washington, D.C.	DFAIT	(202) 682-1740
Incentive Workshop	Feb 1995	Chicago, Illinois	DFAIT	(312) 616-1860
NEBS (Corporations)	Feb 1995	Chicago, Illinois	DFAIT	(312) 616-1860
NEBS (Seniors)	Feb 1995	Minneapolis, Minnesota	DFAIT	(612) 333-4641
Showcase Canada	Feb 1995	New York City, New York Buffalo, New York	DFAIT DFAIT	(212) 596-1600 (716) 858-9500
Spotlight Canada	Feb 1995	Atlanta, Georgia San Francisco, California Boston, Massachusetts Cincinnati, Ohio	DFAIT DFAIT DFAIT DFAIT	(404) 577-6810 (415) 543-2550 (617) 262-3760 (513) 762-7655
Spotlight Canada (Marketplaces)	Feb 1995	Seattle, Washington	DFAIT	(206) 443-1777
Spotlight Canada (Promotion)	Feb 1995	Dallas, Texas	DFAIT	(214) 922-9806
AAL-Canada Products Marketplace	Mar 1995	Dallas, Texas	DFAIT	(214) 922-9806
Adventure Canada	Mar 1995	Boston, Massachusetts	DFAIT	(617) 262-3760
Association Workshop	Mar 1995	Chicago, Illinois	DFAIT	(312) 616-1860
Dateline Canada	Mar 1995	New York City, New York	DFAIT	(212) 596-1600

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
NEBS (Incentive)	Mar 1995	Chicago, Illinois	DFAIT	(312) 616-1860
Showcase Canada	Mar 1995	Los Angeles, California	DFAIT	(213) 687-7432
Spotlight Canada	Mar 1995	Minneapolis, Minnesota	DFAIT	(612) 333-4641
		Buffalo, New York	DFAIT	(716) 858-9500
Western Europe and European Community				
ES-Educational Seminar	Apr 1994	U.K.* Ireland*	DFAIT	(613) 996-5263
FAM-FamiliarizationTour	Apr 1994	Yukon* Toronto, Ontario Canada*	DFAIT	(613) 996-5263
MultiActivity	Apr 1994	Canada* U.K.* Brussels, Belgium Netherlands* Ireland*	DFAIT	(613) 996-5263
NE-Newsletter/Publication	Apr 1994	Netherlands* U.K.*	DFAIT	(613) 996-5263
Promotion (Industry)	Apr 1994	Paris, France	DFAIT	(613) 996-5263
PTT-Product Testing Tour	Apr 1994	Alberta*	DFAIT	(613) 996-5263
SI-Site Inspection	Apr 1994	British Columbia*	DFAIT	(613) 996-5263
TIP-Travel Influencer Promotion	Apr 1994	U.K.*	DFAIT	(613) 996-5263
VCP-(M)-Visit Canada Program (MEDIA)	Apr 1994	Canada* Whistler/ Blackcombe, B.C.	DFAIT	(613) 996-5263
Promotion (Industry)	Apr 1994	France* Brussels, Belgium	DFAIT	(613) 996-5263
ES-Educational Seminar	Apr 1994	Milan, Italy Turin, Italy Bologna, Italy Padua, Italy Ticino, Italy	DFAIT	(613) 996-5263
PTT-Product Testing Tour	May 1994	Alberta* British Columbia*	DFAIT	(613) 996-5263
VCP(M)-Visit Canada Program (Media)	May 1994	Canada*	DFAIT	(613) 996-5263
VCP(T)-Visit Canada Program (Trade)	May 1994	Canada*	DFAIT	(613) 996-5263
Promotion (Consumers)	May 1994	Paris, France	DFAIT	(613) 996-5263
FAM-Familiarization Tour	May 1994	Eastern Canada*	DFAIT	(613) 996-5263
RENCONTRE DE FAMIL'TN A DEST'N	Jun 1994	Canada*	DFAIT	(613) 996-5263

* Exact dates and/or cities to be determined.

Activity	Date	Location	Dept.	Contact
SI-Site Inspection	Jun 1994	Newfoundland* Atlantic Canada*	DFAIT	(613) 996-5263
VCP(T)-Visit Canada Program Trade	Jun 1994	Nova Scotia* Newfoundland*	DFAIT	(613) 996-5263
Promotion (Consumers)	Jun 1994	Paris, France	DFAIT	(613) 996-5263
TS(C)-Travel Show (Consumers)	Jun 1994	Bologna, Italy	DFAIT	(613) 996-5263
TS(T)-Travel Show (Trade)	Jun 1994	Bologna, Italy	DFAIT	(613) 996-5263
VCP(M)-Visit Canada Program (Media)	Jun 1994	Eastern Canada*	DFAIT	(613) 996-5263
TS(MC)-Travel Show (M&C)	Jul 1994	U.K.*	DFAIT	(613) 996-5263
VCP(M)-Visit Canada Program (Media)	Jul 1994	Canada*	DFAIT	(613) 996-5263
Publication	Aug 1994	Paris, France	DFAIT	(613) 996-5263
RENCONTRE DE FAMIL'TN A DEST'N	Aug 1994	Canada*	DFAIT	(613) 996-5263
Multi-Activity	Aug 1994	Netherlands*	DFAIT	(613) 996-5263
ES-Educational Seminar	Sep 1994	Brussels, Belgium	DFAIT	(613) 996-5263
TIP-Travel Influencer Promotion	Sep 1994	U.K.*	DFAIT	(613) 996-5263
NE-Newsletter/Publication	Sep 1994	Italy*	DFAIT	(613) 996-5263
VCP(M)-Visit Canada Program (Media)	Sep 1994	Atlantic Canada* Quebec*	DFAIT	(613) 996-5263
TS(T)-Travel Show (Trade)	Sep 1994	Riva di Garda, Italy	DFAIT	(613) 996-5263
FAM-Familiarization Tour	Sep 1994	Quebec*	DFAIT	(613) 996-5263
SI-Site Inspection	Sep 1994	Canada*	DFAIT	(613) 996-5263
VCP(M)-Visit Canada Program (Media)	Sep 1994	Klondike, Yukon Trail, B.C. Canada*	DFAIT	(613) 996-5263
FAM-Familiarization Tour	Sep 1994	Western Canada*	DFAIT	(613) 996-5263
Multi-Activity	Sep 1994	Atlantic provinces*	DFAIT	(613) 996-5263
Promotion (Consumers)	Sep 1994	France*	DFAIT	(613) 996-5263
VCP(M)-Visit Canada Program (Media)	Sep 1994	Atlantic provinces*	DFAIT	(613) 996-5263
Promotion (Industry)	Sep 1994	Deauville, France	DFAIT	(613) 996-5263
VCP(M)-Visit Canada Program (Media)	Sep 1994	Alberta*	DFAIT	(613) 996-5263
TS(T)-Travel Show (Trade)	Sep 1994	Whistler, B.C. Banff, Alberta Lake Louise, Alberta Quebec*	DFAIT	(613) 996-5263
FAM-Familiarization Tour	Oct 1994	British Columbia* Alberta*	DFAIT	(613) 996-5263

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Activity	Date	Location	Dept.	Contact
VCP(M)-Visit Canada Program (Media)	Oct 1994	Ontario* Quebec*	DFAIT	(613) 996-5263
ES-Education Seminar	Oct 1994	Canada*	DFAIT	(613) 996-5263
TS(T)-Travel Show (Trade)	Oct 1994	Northern Italy* Montreux, France	DFAIT	(613) 996-5263
VCP(M)-Visit Canada Program (Media)	Oct 1994	Churchill, Manitoba	DFAIT	(613) 996-5263
TIP-Travel Influencer Promotion	Nov 1994	Canada*	DFAIT	(613) 996-5263
TS(T)-Travel Show (Trade)	Nov 1994	U.K.*	DFAIT	(613) 996-5263
ES-Educational Seminar	Nov 1994	Northern Italy* TBD*	DFAIT	(613) 996-5263
TS(T)-Travel Show (Trade)	Nov 1994	Brussels, Belgium	DFAIT	(613) 996-5263
VCP(M)-Visit Canada Program (Media)	Dec 1994	British Columbia* Alberta*	DFAIT	(613) 996-5263
TS(C)-Travel Show (Consumers)	Dec 1994	U.K.*	DFAIT	(613) 996-5263
VCP(M)-Visit Canada Program (Media)	Jan 1995	British Columbia*	DFAIT	(613) 996-5263
ES-Educational Seminar	Jan 1995	U.K.*	DFAIT	(613) 996-5263
TS(T)-Travel Show (Trade)	Jan 1995	Utrecht, Netherlands U.K.*	DFAIT	(613) 996-5263
TS(TC)-Travel Show (Consumers)	Jan 1995	Berne, Switzerland	DFAIT	(613) 996-5263
TIP-Travel Influencer Promotion	Feb 1995	Canada*	DFAIT	(613) 996-5263
TS(C)-Travel Show (Consumers)	Feb 1995	U.K.*	DFAIT	(613) 996-5263
RENCONTRE DE FAMIL'TN A DEST'N	Feb 1995	Quebec* Ontario*	DFAIT	(613) 996-5263
ES-Educational Seminar	Feb 1995	TBD*	DFAIT	(613) 996-5263
TS(T)-Travel Show (Trade)	Feb 1995	Milan, Italy	DFAIT	(613) 996-5263
RENCONTRE DE FAMIL'TN A DEST'N	Mar 1995	Quebec* Ontario*	DFAIT	(613) 996-5263
TS(T)-Travel Show (Trade)	Mar 1995	Brussels, Belgium	DFAIT	(613) 996-5263
ES-Educational Seminar	Mar 1995	Netherlands*	DFAIT	(613) 996-5263
TIP-Travel Influencer Promotion	Mar 1995	The Hague, Netherlands	DFAIT	(613) 996-5263
TS(T)-Travel Show (Trade)	Mar 1995	Paris, France U.K.*	DFAIT	(613) 996-5263
NE-Newsletter/Publication	Mar 1995	Canada*	DFAIT	(613) 996-5263
Multi-Activity	Apr 1995	Canada*	DFAIT	(613) 996-5263

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 - Electrical Equipment
 - Oil and Gas Field Equipment
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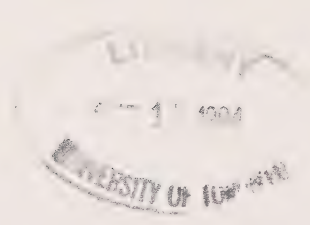
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AVR 94

Urban Transit and Rail

The sector comprises urban transit systems and railway equipment dedicated to mass transit and freight haulage.

International Environment

The market outlook for guided urban transit systems and intercity passenger rail equipment is very promising. Significant opportunities for mass transit exist particularly in North America, Europe and the Far East.

Cities on this continent and overseas that were early converts to mass transit will need to renew their systems and rolling stock. Over the next decade, developing countries, which have some of the world's fastest-growing cities, will require solutions to urban transit problems.

In the U.S., the transit market is estimated to exceed \$90 billion for the five-year period from 1992 to 1997, while the 20-year North American market for high-speed rail equipment has been estimated at \$27 billion. "Buy America" legislation greatly restricts access to the market. Increased intermodal transportation linkages are expected to provide renewed opportunities in the freight rail sector, especially since the implementation of NAFTA on January 1, 1994.

In Europe, some niche opportunities are foreseen. The advent of a single market increases the scope for cross-border strategic alliances and investments between suppliers. Potential in eastern Europe, however, is limited by lack of financing, competition from European multinationals and the low costs of eastern European manufacturers.

In Latin America, privatization offers new opportunities for the supply of equipment and consulting services. Rail standards are the same as Canada's, and it is a relatively close and cheap market to service. However, in the short term, financial constraints may dictate that Latin American countries focus on upgrading and

refurbishing existing plants and equipment. In Mexico, the focus will be on government procurement to upgrade the transportation infrastructure.

In Africa and the Middle East, including Israel, there are opportunities for consultants and suppliers of locomotives and rail maintenance equipment. In Saudi Arabia, there will be opportunities in consulting services for a national railway plan. Many of the opportunities in Africa are with major railroad rehabilitation projects financed by the African Development Bank or the World Bank.

There are few real opportunities in the Asian market for Canadian urban transit products and services, although there is some scope for railway systems and engineering. Distance is a factor, and negotiations are long, which substantially increases the cost of doing business. Culture and language are frequently perceived as barriers. Political instability has affected major projects.

In Australia, the building of standard-gauge systems and the demand for locomotives, rolling stock and control systems provide opportunities for Canadian exports.

Canadian Position

Virtually all Canadian urban transit and rail systems and vehicles are supplied by domestic sources. Over 70 percent of production is exported, mainly to the U.S. About 10 000 people are employed in the manufacture of transit vehicles and related parts and supplies. This excludes after-market components and products, which cannot always be identified by sector, and consulting services, which are also substantial contributors to sales and employment.

Some of the major products and services provided by the Canadian industry are:

- passenger and freight rail cars
- conventional, low-floor and alternate-fuelled buses
- DC and AC traction diesel locomotives
- advanced train-control systems
- locomotive events recorders and simulators
- radios
- end-of-train units
- head-hardened rail and other rail products
- automatic vehicle location and health-monitoring systems
- fare-collection technology
- wheelchair lift and restraint systems for transporting the handicapped
- linear induction motors
- systems and software for scheduling and maintenance of bus fleets
- supervisory control and data acquisition for metro systems
- use of alternate fuels
- consulting services such as the development and implementation of management information systems (MIS) intermodal operations; supervision of rail construction; and locomotive rehabilitation programs.

In addition, some companies have developed specialized procedures and equipment for servicing the rail industry (e.g. transfer lines for stripping, cleaning, inspecting and rebuilding locomotive engines and robot-driven equipment for painting the inside surfaces of tank cars).

Canadian companies, with the proven technologies and expertise, new products, operational efficiency and proximity to the U.S., should be well-positioned to continue to expand market share in the U.S. "Buy America" requirements, however, restrict market access and discourage investment or expansion in Canada.

The final assembly requirement has forced Canadian assemblers of buses and rail vehicles to set up facilities in the U.S. The 60-percent-U.S.-content requirement compels Canadian component suppliers to establish an additional plant or relocate to the U.S. Pressures to increase the content level will need to be countered. Canadian opportunities to participate in U.S. high-speed rail will also be restricted by local content requirements.

Canadian internal trade barriers continue to inhibit industrial rationalization and foster inefficient practices, particularly in the urban bus sector, which faces overcapacity in North America.

Freight rail equipment opportunities in the U.S. market will improve with full implementation of FTA tariff cuts. Canadian firms are expected to continue to play a major role in both the new and locomotive rebuild markets, largely in the U.S., but with some offshore sales as well. Freight car production should see some upturn as railways renew aging equipment and acquire specialized new designs, such as those for intermodal use.

Strategic Direction

- The government will review the rules regarding government procurement and the elimination of non-tariff barriers affecting access to markets for Canadian products and services.
- Industry Canada will seek removal of internal barriers to trade.
- The emerging interest of International Financial Institutions in this sector will be explored.
- The government will continue to provide support to the Transit Suppliers Council of the Canadian Urban Transit Association (CUTA), and its efforts to counteract the U.S. "Buy America" legislation and other non-tariff measures.

- The Transit Export Coordination Committee, a joint industry-government body to improve exchange of information, will co-sponsor business development activities nationally and internationally.
- DFAIT will encourage competitive financing and the formation of export consortia to procure international contacts.
- DFAIT will maintain a database on existing and future expected international markets and an up-to-date directory of Canadian exporters of rail and urban transit equipment and services.
- The government will provide timely information to Canadian exporters with respect to upcoming international trade shows, fairs and exhibitions.
- With reference to NAFTA, the government will:
 - carry out and disseminate the results of a survey to determine opportunities in Mexico for Canadian transportation products and services, and the type of commercial arrangements most likely to be successful in exploiting these opportunities
 - focus on access to government procurement in Mexico, given Mexico's requirement to upgrade its transportation infrastructure and market identification and intelligence.

Contact

Urban Transit and Rail Directorate
 Automotive, Urban Transit and Rail Branch
 Industry Canada
 Tel.: (613) 954-3443
 Fax: (613) 952-8088

Urban Transit and Rail

Activity	Date	Location	Dept.	Contact
Africa and the Middle East				
Outgoing Transport Mission	May 1994	Jordan* West Bank* Gaza* Syria*	DFAIT	(613) 944-6994
Participation of Tunisian Ministry of Transportation to Toronto '94	Jun 1994	Toronto, Ontario	DFAIT	(613) 944-8134
Outgoing Equipment Mission/Transport	Oct 1994	Algeria*	DFAIT	(613) 944-8134
Asia Pacific South				
Truck Canada (Incoming Mission)	Oct 1994	Toronto, Ontario	DFAIT	(613) 995-7662
United States				
Intermodal '94 Transportation	Apr 1994	Atlanta, Georgia	DFAIT	(613) 944-5149
Buy America/Womens' Business Enterprises/Disability Business Enterprises	May 1994	Montreal, Quebec Toronto, Ontario Winnipeg, Manitoba, or Vancouver, B.C.	DFAIT	(613) 944-5149
Information Conference and Partnering Opportunity, Transportation Services	Jul 1994	Seattle, Washington	DFAIT	(613) 944-5149
Information Booth at American Transit Association Conference	Sep 1994	U.S.*	DFAIT	(613) 944-5149
Solo Urban Transit Show	Nov 1994	Detroit, Michigan	DFAIT	(613) 944-5149
Transit Mission to New York City	Jan 1995	New York City, New York	DFAIT	(613) 944-5149
Urban Transit Mission to California	Feb 1995	Los Angeles, California	DFAIT	(613) 944-5149
Western Europe and European Community				
TGV Rail Transportation Mission	Jun 1994	Paris, France	DFAIT	(613) 996-2363

* Exact dates and/or cities to be determined.

Canada's International Trade Business Plan is made up of three key components: a Strategic Overview, a series of industry sector strategies, and an accompanying series of international activities lists. Industry sectors available include:

1. Advanced Manufacturing Technologies
2. Aeronautics
3. Agri-Food Products
4. Arts and Cultural Industries
5. Automotive
6. Biotechnologies
7. Business and Professional Services
8. Chemicals and Plastics
 - Chemicals and Petrochemicals
 - Plastics and Polymer Products
9. Consumer Products
 - Apparel Industry
 - Business and Institutional Furniture
 - Footwear
 - Hardware and Housewares
 - Household Furniture
 - Sporting Goods (including recreational watercraft)
 - Textiles
10. Defence and Related Products
 - Aviation, Marine and Defence Electronics
 - Marine and Land Defence Systems
11. Electrical and Energy Equipment
 - Electrical Equipment
 - Oil and Gas Field Equipment
12. Environmental Industries
13. Fish and Seafood Products
14. Forest Industries
15. Industrial Technologies
 - Agricultural Technology, Machinery and Equipment
 - Mining — Forestry — Pulp and Paper
 - Ocean and Marine Shipboard Technology
16. Information Technologies
17. Medical and Health-care Products
18. Minerals, Metals, Advanced Materials and Construction Products
19. Space
20. Tourism
21. Urban Transit and Rail

For information on how to receive the Strategic Overview, or additional industry sector strategies and international activities lists, please call: **1-800-267-8376**



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